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SCIENTIFIC

TRANSCENDENTALISM.

BY

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14, HENRIETTA STREET, COVENT GARDEN, LONDON;
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1880.

265 . j . 295 .

LONDON:
G. NORMAN AND SON, PRINTERS, MAIDEN LANE,
COVENT GARDEN.

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indicates nothing that resembles the discovery of resemblances.

And not knowing what Science is, the man of science cannot say whether it is a good or a bad thing to be scientific. It is an agreeable thing, certainly; but some agreeable things are not good, and Science, for anything the scientific man knows to the contrary, may belong to the class of agreeable bad things.

In short, he has nothing at all to say respecting the ultimate or moral value of things. He has fine moral instincts himself, but he cannot account for them. He loves a brave, pure, truthful man, and hates one of an opposite character; but he cannot tell why. His atom has no moral character, and therefore he is unable to explain the morality of organisms that are nothing but aggregates of atoms.

2. In no age, however, not even in the last three centuries, have the facts of Mind been wholly neglected. A few men are always to be found whom nothing can hinder from studying their mental processes, and giving the world the benefit of their experience. It is well that such is the case; for, after all is said that can be said to the contrary, the mind is something we cannot dispense with, and we ought not to be wholly ignorant of its manner of working. If we knew it more intimately, perhaps we might turn it to better account than we do.

Mental knowledge ranges from the bass string of

Logic to the highest tones of Poetry and Transcendentalism. What we have to consider here concerns some of the higher tones.

The transcendentalist, like the materialist, ends by formulating a theory which he puts forth as a universal theory—as a theory, that is, from which he believes that all the facts of the universe may be deduced. His experience, he says, has led him to conceive that above the sky there resides a Person (or Persons) who made the universe out of nothing, and now keeps it in motion by an infinite power; that this Person loves and protects good men in a special manner, and is angry with the wicked every day; that He sees everything which takes place in the universe and can at His pleasure prevent anything from taking place, or cause anything to take place, without reference to the previous state of the universe: and so forth.

If this theory were put forward as an explanation of Mind alone, by those who had made Mind their special study, no one whose attention had been wholly directed elsewhere would have any right to question the truth of it. But the moment the Personal theory is offered as an explanation of Matter also, it becomes a fair subject of criticism to the materialist. And he makes short work of it. "There is not," he says, "the faintest trace of external, personal influence discernible in the phenomena of Matter. Every material effect takes place by virtue of impersonal laws, habits or

tendencies inherent in the things themselves. I believe, though I cannot prove it, that personal conduct is itself an effect of impersonal law. I wholly fail to see that the righteous are protected in any special manner from the ills of life: a bad ship is as likely to founder with a cargo of missionaries as with a cargo of convicts. And I know that every material effect is determined by its antecedents."

From which we are justified in concluding that although the theories of the transcendentalist and of the materialist may each of them embody a great deal of truth, neither of them can embody all of it—neither of them can be accepted as the universal theory.

3. Assuming for a moment that the universal theory is a desirable thing,—and if it were not there would be fewer attempts to find it,—how ought we to set about discovering it? We all have a certain amount of experience in the construction of everyday theories on common subjects; from this experience is it not possible to elicit rules for the discovery of great theories—of the greatest theory?

For instance, it is a very common event to see a machine whose use or purpose we desire to know. To discover that purpose is to formulate a theory of the machine. If now we consider attentively the mental process that takes place every time we divine the use of a strange machine, we shall find that it is

simply this,—we see a *resemblance* between the new machine and a machine we have seen somewhere before and of which we know the use, and we now conclude or theorize that the use of the new machine is the same as the use of the old one. If, on the contrary, we cannot divine the use of the new machine, we shall find, on consideration, that this inability arises solely from the fact that we do not see a sufficient resemblance between the new machine and any other we have ever seen before. To theorize, therefore, is nothing more mysterious than to find a resemblance between the thing to be known and something else that is already known.

Applying this conclusion to the great question alluded to above, we get the following result:—

To the transcendentalist, who already knows Mind, the thing to be known is Matter. Therefore to complete his knowledge of the universe, all that the transcendentalist needs is to see the resemblance—if there be one—between Mind and Matter. To the materialist, who already knows Matter, the thing to be known is Mind. Therefore to complete *his* knowledge of the universe, all that he needs is to see the resemblance—if there be one—between Matter and Mind. Obviously, then, the universal theorist—supposing always that a universal theory is possible—must be one who is at the same time a transcendentalist and a materialist. These are the sole

conditions of finding the one theory that explains everything.

The rest of this introduction is a historical sketch of how these conditions were fulfilled, if not for the first time, at any rate for the only time in these latter ages.

4. Four years ago nothing was farther from the mind of him who writes these lines than the desire of becoming an author of books, a man of science, or a public theorist on any subject whatsoever. He was then in the service of a banking company in the interior of South America. He had a taste for modern languages and comparative philology; read the Bible, Plato, Shakspere, and Jeremy Taylor; taught the Gospel of Jesus Christ in the Sunday school; and tried to do his duty, as far as he knew it, in the least offensive way. He had acquired the in-that-country contemptible character of "hombre sin vicios," which it was part of his creed to maintain.

One morning, however, this quite commonplace individual awoke to find himself possessed of a curious power of inventing allegories or parables on all sorts of moral and metaphysical subjects. Conceptions chased each other through his imagination like dissolving views. Occasionally a brighter image than the rest would stay long enough to be described: it would float before the eyes like a fairy scene in a pantomime, blotting out a large surface of the earth

for a time; but usually the figures succeeded each other too rapidly to be described even in shorthand, and at times they melted together in one long train of shapeless, delicious emotion.

The subject of this abnormal mental experience concluded at once that he had now a personal acquaintance with what is termed "Inspiration" or transcendental "Vision;" but he never for a moment believed that his conceptions were suggested by a "genius" or a "god" or an "angel," or were anything more than some perfectly natural and accountable outcome of his constitution and circumstances. As, however, no rational explanation was immediately forthcoming, he determined to devote all the time he could spare to a careful study of the phenomenon; and the better to carry out this determination he, a year afterwards, dissolved his connection with the American continent, crossed over to France, and shut himself up in a Parisian garret to think the matter out.

5. His method of inquiry was simple enough. The inspiration-fits were of almost daily occurrence and lasted from one hour to four or five hours. During these periods he let the "spirit" have its fling: in the intervals he ransacked heaven and earth for some conception of the mind, or soul, or understanding, or intellect, or whatever it is that was accountable for the effects.

For six or eight months all was mystery and con-

fusion. One theory after another was run through the facts, and found wanting. They all promised much at first, and some of them did, indeed, account for a good many of the effects; but when pushed to their logical conclusions each of them was found to involve some inconsistency that wrecked it. It is quite needless to describe any of these theories: they were very absurd.

At last the inquirer drifted into the following train of speculation:—

> The subject-matter of all these utterances is mental—it relates to logic or metaphysics or morals. I am never inspired on the subjects of botany or astronomy or the higher calculus. And yet the vision I see is material; it is a landscape, animals and plants, men and women, some aspect of light or air or water. Although my meanings are mental, I in reality speak of material things. And I cannot do otherwise; if I abstract from my thought its material appearance, nothing remains. Words that have no material meaning do not express my thought in the least degree. It would seem as if Thought was another sort of Matter;—if I assume that it is, will that explain the phenomenon?
>
> It is a condition of speech concerning material things, that we speak of the absent in terms of the present. If I wish to speak of an American thing to a European who has never been in America, I must refer to some European thing that is known to him, and predicate of that what in reality is true only of the American thing. If, now, Mind is another sort of Matter, it may bear to Matter more or less the same relation as America bears to Europe; and if so, it follows that in trying to speak of mental things,—which are absent or unproduceable, for we cannot take out

our thoughts and lay them on a table for examination,—we must speak of them in terms of material things. Assuming that Mind is to Matter as America is to Europe, it is quite reasonable that my words should on the face of them bear a material meaning.

That was well so far as it went, but other theories had gone farther before breaking down. He continues:

But on this assumption it should be impossible for any one to make any statement whatever concerning the mind without expressing or implying the resemblance of Mind and Matter. Not the inspired alone, but logicians, metaphysicians and pietists must all speak of Mind in terms of Matter. Is this so?

Minds are frequently said to be *large, small,* or *mediocre*—as if they had superficies; of being *shallow, capacious,* and *profound*—as if they had solidity; of being *slow* or *swift*—as if they had motion. Judging from popular language, there is also a mental *density, gravity,* and *levity, elasticity, tenacity, softness,* and *inflexibility:* all of which are properties of solid matter.

To some, however, the mind does not appear to be solid but liquid, for they call it *Soul,* which means *sea.* Hence, as seas may be *rough, stormy, troubled, tossed, allayed, &c.,* so may the human soul or sea, and they speak of it accordingly.

A third party conceive the mind to be gaseous—it is a *spirit* or wind. So we have spirits that are *high, low, rude, gentle.* Spirits are also said to be *wounded* and *bound-up,* which is absurd, for we cannot wound or bind-up the wind.

"Hopes," a subdivision of the mind, are said to be *inflated,* to *soar,* to *collapse;* which seems to agree with the wind-theory. But they are also said to *blossom,* to *fade,* to be *blighted;* which makes of the mind a vegetable or something which produces vegetables. On the other hand, we should infer from the vocabulary of the

"feelings" that Mind is animal, for feelings may be *hurt, wounded, lacerated, restrained, soothed* and *calmed.* But it is hard to conceive how they can be *harrowed* and *trampled upon,* unless after decomposition.

Besides feelings, the mind seems to have vision: we often say "Do you see?" for "Do you understand?" *Ideas* are things *seen,* and *wisdom* probably means the *seeing* state. But before a thing can be seen by the mind's *eye* it is necessary that mental *light* be thrown upon the subject; which seems to imply that Mind also has an Out and an In,—that there is a more and less personal kind of emotions just as there is a more and less personal kind of sensations. This is implied also in the phrases "world of thought," "mental growth," "mental life."

Apparently, then, every one that ventures to speak about the mind is under the same necessity as myself of assuming that Mind is another sort of Matter.

And yet how incredible is that assumption at first sight! Matter resists—causes and destroys motion—may be walked-upon and turned over with a spade; whereas Mind appears to be pure, impalpable glitter.

True; but these differences may be in appearance only. Let me examine them more closely.

At bottom the differences between Mind and Matter resolve themselves into these two: Matter is extended and dynamic or powerful, Mind is unextended and seemingly powerless. These differences will disappear if it can be shown that Mind also is dynamic, and that either Mind is as capable of being extended as Matter, or that Matter itself may in certain cases be unextended.

The first difference disappears at once: Mind *is* dynamic, for cannot my *wish* to be driven along the street cause a cab to stand still and then to go on again? Will not a *dream* cause one to start up in bed as if he had been pulled or shaken violently? Are not our *motives* mental, and is not our body that which they move? In my own

case, at least, the mind has tyrannized over the body ever since the two entered into partnership. My thoughts have dragged my body over land and sea, exposed it to hunger and cold, denied it needful rest, condemned it to the painfullest solitude, subjected it to the cruellest humiliations. I, for one, cannot believe that my body is as indifferent to the ideas of the mind as a sheet of paper to the letters that are written upon it. On the contrary, it appears to me that every human action may be traced back to a thought.

With respect to the extension difference. At bottom both Mind and Matter are masses of Consciousness or Sensation. For anything I certainly know to the contrary, there may exist nobody but myself—all other things and persons are facts of my consciousness, and myself am nothing but a sensitive point. My very body is part of my consciousness.

This consciousness consists of two portions which I choose to call Mind and Matter. The first appears to be shut up within my head, and the other to be spread out into a world which is not Me; but there was a time when my material consciousness was as close-fitting as my mental consciousness is now, namely, before I was born and for some time afterwards. The externalizing of Matter has been an effect of experience: it is not yet complete, for I cannot extend the spaces of the sky. Men extend the world differently: a sailor extends the sea better than a landsman, a ploughman extends the fields better than a cockney. What, then, is to prevent my believing that my mental consciousness is now in the state in which my material consciousness was before it was arranged perspectively? And what is to prevent my hoping that my mental consciousness will expand into a mental world when the material world disappears to make room for it?*

* From what hath been premised, it is a manifest consequence, that a man born blind, being made to see, would at

Up to date, therefore, there is no difficulty in believing that Mind is to Matter as America is to Europe.

6. About this time he spent some weeks in studying the phenomena of Causation, with a view to determining whether Mind and Matter could be related as cause to effect; and if so, which should take precedence of the other. He could scarcely believe that the two were mixed, that is, that force was sometimes generated by one and sometimes by the other: it was more likely that the current flowed always in the same direction. But these questions not being then answerable in a satisfactory manner, he returns to the general resemblance of the two consciousnesses.

Before leaving England for America, I had read all the books I could find that treated of the countries and people I was about to see—read them carefully, and believed I had acquired a true conception of Lisbon, Rio Janeiro, Buenos Ayres, Spaniards, *gauchos*, *pampas*, and so forth. Great was my surprise then to find that my preconceptions were wrong in every particular. At first I blamed the books, then my own stupidity; but I have since paid some

---

first have no idea of distance by sight; the sun and stars, the remotest objects as well as the near, would all seem to be in his eye, or rather in his mind. The objects intromitted by sight would seem to him (as in truth they are) no other than a new set of thoughts or sensations, each whereof is as near to him as the perceptions of pain or pleasure, or the most inward passions of the soul. For our judging objects perceived by sight to be at any distance, or without the mind, is entirely the effect of experience, which one in those circumstances could not yet have attained to.—Berkeley's *Theory of Vision*.

attention to the effects of language on the mind, and now believe that words, however well composed, have no power to create in us wholly new ideas,—they merely re-arrange our old ones.

Now, suppose it was as difficult to make the voyage from Europe to America as it is to develop the transcendental vision. Suppose, also, that Europeans had some reason to be intensely interested in America, so that every scrap of intelligence from over the sea was eagerly sought out and made the most of. Suppose, further, that this state of things had lasted so long that societies of men had gradually organized themselves for the sole purpose of collecting, distributing and commenting on American news. Then it follows from the relation of language to knowledge, that the European mind would at length become saturated with ideas concerning America that would have only the vaguest resemblance to the truth. The holders of these ideas might have no suspicion of their error: they might even in perfect good faith issue solemn certificates of each other's rightness, for, as Bacon remarks, when men go mad in the same way they appear to each other sane enough. Though false, these ideas would not perhaps be quite useless. They might take the place of worse ideas. They would keep alive the tradition of America. The collecting and editing and amplifying of American news would give employment or amusement to those who took just enough interest in America to talk about it, but not enough to face the dangers of travelling to it. They might now and then excite a bolder spirit to undertake the voyage.

Imagine now that a European who had acquired the traditional notions of America was driven across the Atlantic by stress of weather, and made to see with his own eyes the sort of thing America really was. What an opening of the understanding it would be! What a sudden destruction of venerable fallacies would take place in his mind! With what shame and indignation he would

> remember the years he had lost in committing to memory the conventional rubbish about America! Suppose him returned to his kindred. What shall he say to them? If he be honest enough to speak the truth to his own hurt, he will say,—"Ye are all wrong every one of you. America is not what you conceive it to be, nor anything like it. You have been deceived by pictures. Your learning on the subject of America is all vanity. Your private judgment in respect to America is private nonsense. Your whole philosophy of America is founded on tropes and personifications."
>
> That is precisely the attitude of an inspired seer of the mind towards the mere student of philosophical and theological literature.

But if the mental philosophy of the uninspired scholar is very bad, it is chiefly because the inspired symbolism is very bad. This also may be explained by the geographical parallel.

Let an American who thoroughly knows his native continent be brought over to Europe. Then because his descriptions of America must consist entirely of declarations of resemblance between things European and things American, it is obvious that he cannot make the least statement concerning anything American until he have found something European that resembles it. Not only so, but he may even see multitudes of resemblances between the one continent and the other, and yet be unable to speak of them to Europeans from ignorance of the European languages. Let him, however, stay long enough in Europe to know European things and their names, and he will at

length be able to speak of America in terms of Europe with the greatest fluency and exactness.

This hypothetical American in Europe corresponds to the transcendentalist in the domain of Matter. Mental knowledge is independent of material knowledge, but our power of *expressing* mental knowledge is in direct proportion to our knowledge of Matter. Not only so, but we may see multitudes of resemblances between Mind and Matter, and yet be unable to utter them because of our ignorance of the material vocabulary. The purest bullion of mental knowledge has no purchasing value until it be converted into the material currency. Let the mystic, however, study material things long enough, and learn their names, and he will at last be able to speak of Mind in terms of Matter with the greatest ease and exactness.

But the inspired have never been remarkable for their material knowledge; rather, they have been remarkable for their material ignorance—they have even been proud of their material ignorance. At best their material knowledge has been of the superficial, sentimental, dilettante sort. Hence, although their mental knowledge may have been ever so perfect, it is inevitable that their expression of it should be imperfect.

There are three principal degrees of resemblance among things, of which these assimilations are examples:

The sun is like a fixed star.
The sun is like a fire.
The sun is like a shilling.

All three statements are perfectly true; each is knowledge of a sort; but whereas the first similarity is visible only to persons that are endowed with extraordinary powers of assimilation, the second and third are within the reach of children and idiots. The first kind of knowledge is valuable because we can instantly transfer to the sun the attributes we have already found to be common to all fixed stars, and every enterprise whose realization depends on the essential similarity of the sun and the fixed stars will meet with success. The other kinds of knowledge are not only worthless but dangerous, for every enterprise in which we engage on the strength of the sun's having the attributes common to all fires or all shillings, will end in disappointment or disaster. Unquestionably, a little knowledge is a dangerous thing.

Now the slightest acquaintance with the literature of the mind is enough to convince any one capable of interpreting it, that the mental-material assimilations of which it consists are all (or nearly all) of the second and third class of exactness. No man has braced together a series of mental and material facts that resemble each other as closely as the sun resembles a fixed star. In other words—mental knowledge (by reason of its greater difficulty) has not yet attained

the precision of material knowledge. It is knowledge, but not science. It is at this moment in the state in which material knowledge was before the days of exact observation and rigorous deduction.

7. But it need not continue in this state for ever. If Mind and Matter resemble each other in any degree, that is reason enough for expecting that they resemble each other in every degree. So thought this modern mystic, and the next soliloquy reveals his mind creeping up to the notion of determining the exact quantity of resemblance that obtains between the two great divisions of the universe.

> It appears, then, that Mind is another sort of Matter. The inspired are those that perceive the resemblance between the two. But the resemblances they perceive are very imperfect: a fragment of Matter here resembles a morsel of Mind there; or part of a mental object resembles part of a material object, while the complements of each have no similarity. What a lame story it is, to be sure. Is it because Mind turns to us its torrid zone and Matter its frigid zone that we cannot speak continuously of one in terms of the other without talking nonsense? Or is it that we see Mind in a state of chaos and Matter in a state of cosmos? Is Mind the scattered fragments of a broken universe, or the raw materials of a new one about to be created?
>
> But if Mind be to Matter as America to Europe, the bad assimilation of the two may be wholly the fault of the assimilators. Have they taken pains to seek out the true correspondences, or have they not rather snatched at the first simile that came to hand in their eagerness to deliver their message? What sort of being is the typical

mystic? A poor, unlettered, unscientific man, to whom the "word of the Lord" has come while he wrought at his carpenter's or cobbler's bench, tended sheep, mended kettles, or guided the plough. His after-life is one long tearful shriek of "damnation" against the profligate and hypocritical. Accepting without inquiry the flattering tradition of his order that he is a special messenger from God to men, he would consider it a heinous offence to be too nice in the choice of his figures. He does not stay to choose them at all; he speaks what comes first with the incontinent passion of a child. Anything is good enough for the *canaille* of kings and priests against whom he fulminates. "I am not careful to speak unto thee, O king," —that is the style of the moral enthusiast of all times and places. It is "God" that dictates, it is the "Spirit" that giveth utterance: *they* are responsible for the truth and propriety of his statements, not he. From such a person it were vain to expect exact assimilation.

What is Idolatry?

All the facts of Matter are co-related like the parts of a machine or of a mosaic. They never appear alone but always in ordered groups, so that one cannot be conceived without calling up the memory of a multitude of others. Hence if we are told that a certain material fact, A, has a mental correspondent, B, nothing can prevent us from believing that B is associated with a host of mental facts corresponding to the host of material facts with which we know that A is invariably associated. If A were to B as the sun is to a fixed star, there would be no harm but good in drawing such an inference; but if A is to B as the sun is to a shilling, our inference may be in the highest degree pernicious—the best we can hope is that our inference is harmless nonsense. Idolatry or mental mythology is a system of deductions logically drawn from an imperfect mental-material assimilation. And who is responsible for the Idolatry? Obviously, the original assimilator. Not

the people, for they can neither abstain from drawing conclusions nor separate the true conclusions from the false: they are not in a condition to verify their deductions.

The transcendental policy is truly peculiar. A prophet appears with some sense of the relation of Mind to Matter. He speaks it out in parables or some other form of imperfect assimilation; and goes his way. A few generations later another prophet appears and finds his predecessor's tropes developed into a well-furnished Pantheon. He goes into a divine rage, of course, and devotes his life to the destruction of the rich but deadly harvest that has grown —in the most legitimate and inevitable manner—from the first prophetic message. If he be not put to death for blasphemy but is listened to and obeyed, what positive work does he accomplish? Why, he plants a new set of metaphors that blossom into another mythology, which has eventually to make way for a third—and so on. These are the various revelations, dispensations and reformations.

In all that there is a terrible waste of the best kind of energy. And must it be always so? Must the prophet be always like a foolish husbandman that sows wheat with one hand and tares with the other? Is it not possible to assimilate Mind to Matter with as much exactness as we assimilate the parts of Matter to each other, so that every deduction we make will be a gain and not a loss? What a blessing it would be if the fitful broken lights of Poetry could be gathered into a steady daylight of scientific mental knowledge! One single exact equation would outvalue a whole encyclopædia of figures.

My own assimilations are all figures. Even the geographical theory, which has served me so well hitherto, must be dropped. Mind is *not* to Matter as America is to Europe, for that hypothesis fails to explain the absorbing interest which even the most material take in certain mental questions. The people of Europe take no such

absorbing interest in anything American. They even contrived to exist for many centuries without America, whereas we cannot for a moment exist without Mind. Besides, the passage from a material to a mental way of looking at things is not a change of place like the passage from Europe to America; it is rather a sort of growth, or birth, or awaking, or—

Hold there!—I think I have it.

There is a formative or organizing power in Matter that draws its particles together and builds them into crystals and plants and animals. If Mind be a substance like Matter it also must be pervaded by this force. It cannot remain an amorphous heap of mental dust; it must be alive, or at least in motion. Suppose my soul is compiled out of the mental substance and possessed of that degree of organization called "Life," then my mental operations should exactly correspond to my bodily operations. The characteristic fact of my soul is *Thinking*, of my body it is *Feeding;* if Mind have any scientific right to be assimilated to Matter, these two operations should coincide in all essential particulars.

And they do, by all that is Logical!

From the food received into the system we extract that which is similar to the body and expel the rest.	From our material perceptions we abstract the similar or essential attributes and ignore the accidental.

The Soul, then, is a mental animal, and thinking is the *sensation* that accompanies its growth. The acquirement of material knowledge is the acquirement of mental life. The scientific exponents of all our mental operations must be sought in the Physical and Chemical operations of the body, and not in the fields and forests and skies where the poets go to seek for them. The soul acts as mechanically or causally as the body: Mind, as well as Matter, is governed by inherent, impersonal laws.

> But if material knowledge suffice to build up the soul, what place or necessity is there for mental knowledge? Does the soul turn round and feed upon itself?
>
> No; precisely because the soul is another body it must itself be provided with another soul; and the beginning of this third life—its first, sudden, chemical activity — is *Inspiration*.

This induction closed the first year of study; and the student, content with the result, quitted Paris and wandered for some months in Belgium and Germany to let the new idea settle down into him.

8. His meditations in Flemish churches and quaint Rhine towns did nothing to unsettle his new conception, but rather to confirm it. He thus resumes in London:

> The longer I think of my soul as another sort of body, the more reasonable and credible does the conclusion become. The Vitality theory explains all that the geographical theory explained, together with all that the latter theory did not explain. For every mental law of which I have a clear perception, I can find a corresponding law in the body,—not a trope, or illustration, or figure of speech, but a genuine, substantial repetition of the higher fact. Soul and body are like two maps of the same country; but the former is on a much smaller scale than the latter. Mind is much consciousness to little substance, Matter is much substance to little consciousness. Mind is Matter in a highly condensed or abstract form; Matter is Mind in a very diffused, developed, expanded form. Mind is what Matter has been; Matter is what Mind will be. Hence the difficulty which persons ignorant of the higher material abstractions must have in finding the true exponents of their mental experience. Hence the power I find in myself

> of conceiving the most intimate secrets of Matter without experiment. If matter is a revelation of Mind, Mind is not less a revelation of Matter.

Half a year later he exclaims with still greater confidence :

> Assume that the soul is a mental body, apply to it the known laws of the material body, and there is not an iota of our mental experience that may not be accounted for in a rational manner. The man that cannot see the resemblance between Mind and Matter because the former appears to be all sensation without substance, and the latter to be all substance without sensation, is like one who cannot see the resemblance between the moon and the earth because the former appears to be all light without matter and the latter to be all matter without light. The soul is no more unsubstantial consciousness than the moon is immaterial illumination : the body is no more unconscious substance than the earth is unillumined matter. Both Mind and Matter are conscious substances. As the moonlight is referred by the astronomer to an invisible globe of solid, earth-like materials ; so is mental sensation referred by the transcendentalist to a solid, matter-like body. Tasting and digesting are bodily thinking, as Thinking is mental tasting and digesting. And since the body is a perfect exponent of the soul, every other exponent is imperfect. I believe I can hold that position against all comers.

To one who was familiar with the nature and value of theories, and who had good reasons for believing that Mind and Matter were only varieties of the same primitive substance, the possibility and desirability of formulating one definition that would be equally true of both,—in other words, of framing a universal

theory,—were too obvious to be overlooked. Virtually the position already attained was the universal theory; it wanted nothing but the verbal expression and application.

> My next step is now clear. I must verify my present material conceptions, and then apply the material laws and vocabulary to the mental phenomena in the manner of geometrical superposition. If Mind be, as it appears, scientifically equal to Matter, the ultimate abstractions of each must be equal, and all their subordinate parts must be equal, each to each, although I may not be able to verify the equivalence throughout. It is enough if that which my deduction assumes to be equal be not demonstrably unequal.

Or as he otherwise puts it:

> Since Mind in the mass is equal to Matter in the mass, the particles of each must coincide. And since Knowledge is nothing but the abstraction of that which is common to things and the rejection of their difference, I am justified in assimilating the mental molecule to the material molecule, in abstracting their sameness and eliminating their difference, and in positing a sort of transcendental atom that shall override both Mind and Matter in precisely the same manner as the material atom overrides the sub-universe of Matter alone. I, as it were, sublimate the old atom and trail it back to a position from which it rakes both heaven and earth with equal precision.

The next twelve months were spent in material studies, in coupling together the corresponding facts of Mind and Matter, in writing a treatise on Logic from the Vitality stand-point, and in reading whatever

literature was likely to suggest objections to the new theory. The objections were numerous enough, but none was insuperable: the principal will be found in the sequel, with the manner of treating them.

By the time the writer had proved his theory to his own satisfaction, there remained only a few months in which to put his work in such a shape as might be useful to others. All that was possible in the time has been done, but the result is not very pleasing to look at; it rather resembles an invoice of goods than a treatise on philosophical subjects. Since the unity of the argument might not be broken, the argument has been cut down to the bone, and the indispensable comments—which serve chiefly to accentuate deviations from received hypotheses—are given in the form of notes. The barbarous style will perhaps be pardoned when it is remembered that Moral Law has never before been made a subject of exact demonstration from common experience. Logic has hitherto been hostile to Righteousness: to make it change sides is worth a little sacrifice of our æsthetic sentiments. Have we not had almost enough of sentimental morality?

9. Great assimilations are of interest to all men, whether they know it or not.

The average citizen may never have heard of Ptolemy or Copernicus, and may believe that he does not care a straw whether the sun goes round the earth

or the earth round the sun. But if all men were suddenly to become equally careless of astronomical theories, the average citizen would soon feel the difference: his tea and tobacco would rise in price, his cutlery and cotton would fall in demand. The passengers of a ship are not required to be skilled in navigation, but they are greatly interested in knowing whether their captain be a skilled navigator or not. Nearly all the great discoveries and inventions of which we every day feel the practical material benefit, have had their origin in the conceptions of unpractical idealists.

As in the trivial affairs of the body, so in the serious affairs of the mind: a few have to think for themselves and for all the rest. The unanimity of these few is the only guarantee the many have that they are being led in the right direction. A slight error in the front rank of thinkers becomes a great error when multiplied and realized by the thousands and millions that file after them. Disunion in the leaders disintegrates the society. And what is the actual state of opinion among the aristocracy of Thought? One party believes the universe is governed by a sort of Man whose favour may be won by gifts and flattery. Another party believes that one half the universe is automatic and the other half unknowable or not worth knowing. A third party will not violate its reason by allying with the first, nor its sentiment by allying

with the second—and does not know what to believe. Such a state of things is anarchy. On the nature of the universe and the destiny of man there should be but one opinion, for only one can be true. That opinion should not rest on the authority of any man or any number of men; it should be worked out anew by the competent of each generation, for we have no absolute guarantee that the universe will not one day change its character. It should be a subject of common discussion in the plainest terms, like any other generalization. The clearest possible symbol or definition of it should be forced upon the notice of every child who is fit to understand the use of it, that he or she may early regulate their life thereby and waste as little as possible of their energy in trying to realize the unrealizable. Until something of this kind be accomplished, it is vain to look for peace on earth and good will amongst men. There can be no peace where there is no uniformity of conduct; there can be no uniformity of conduct where there is no uniformity of thought. If a definition of the universe could be framed that would appear equally true to the three great classes of thinkers,—that would first put an end to their own doubts and differences and then unite them in one common crusade against ignorance, hatred and insincerity, —it would do more to advance civilization than anything that has happened since the advent of Christianity.

THE FALLACY OF LANGUAGE.

BY INDUCTION.

I.

1. The "Fallacy of Language" means here an erroneous opinion held by certain persons with regard to the functions of Language.

Archbishop Whately* declares Language to be "an instrument of thought, and a means by which we communicate our thoughts to each other." According to Dr. Hugh Blair,† it is "a vehicle by which the most delicate and refined emotions of one mind can be transmitted, or, if we may so speak, transfused into another." Dr. Campbell‡ says: "It is the intention of eloquence to convey our sentiments into the minds of others, in order to produce a certain effect upon them. Language is the only vehicle by which this conveyance can be made."

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* Elements of Rhetoric, *Introd.* § 4.

† Rhetoric, *Lect. VI.*

‡ The Philosophy of Rhetoric, *Book* ii., c. i.

Generalizing these definitions, we take it to be the opinion of rhetoricians that—

> Language is a means by which we create (*i.e.* produce, cause to exist) in another mind the duplicate of thoughts that exist in our own.

That is the opinion or theory of Language that is believed to be erroneous. Let us call it the "rhetorical" theory.

2. In the first place, it is not true that Language always creates in the hearer's mind a duplicate of the speaker's thought, for the speaker sometimes lies; in which case the thought that precedes the speech may have any degree of difference from the thought that follows it.

In the second place, even when the speaker is truthful his language is sometimes foreign to the hearer; in which case the speech no more creates thought than does the sound of flowing water or the rattle of a carriage wheel.

These objections are fatal to the rhetorical theory as it stands, but it may be so modified as to evade these objections and yet retain the error against which this argument is mainly directed. For instance, the rhetorician might take up the following position:

> Language is a means by which a truthful speaker may create in another mind the duplicate of thoughts existing in his own, provided the language used be equally well known to both.

3. Against this definition it is enough to call attention to two facts that are sufficiently notorious. Of these one is the impossibility—even when the speaker is quite truthful and uses the language best known to himself and the hearer—of creating in another mind an absolutely complete impression of any event witnessed only by the speaker; and the other is, that the same discourse operates differently on different minds.

To this the obvious rhetorical reply is, that only persons skilled in Rhetoric are competent to use the instrument of thought, and that only persons having a certain degree of intelligence are proper subjects to be operated upon. That is to say—

> Language, if employed according to the rules of Rhetoric, is a means by which a truthful person may create in a mind endowed with a certain degree of intelligence, the duplicate of thoughts existing in his own, provided the language (or idiom) employed be equally well known to speaker and hearer.

4. The thought-creative power of Language is diminishing rapidly, and what remains must be still further attenuated, nay, must altogether disappear; for *under no conceivable circumstances does Language create any knowledge except the perception of itself.* But before submitting the matter to the test of experience, let us hear the opinions of some great thinkers

who were masters of Language and addressed audiences possessed of at least the average degree of intelligence.

In the *Phædrus*, Plato (or Socrates) declares that "he who thinks to leave an art in writing, and again, he who receives it as if something clear and solid would result from the writing, must be full of simplicity, since he thinks that written words are of further value than to remind one who already knows the subject of which the writings treat." Everybody has heard of Hobbes's dictum that Words are the counters of wise men and the money of fools; and remarks of a similar character are found in the writings of Bacon, Locke, Goethe, Carlyle, and others. Descartes, after being educated at one of the most celebrated schools of his time, wandered out into the world only to find that nothing there was such as he had been led to conceive it to be. In "Paradise Regained" Milton makes Jesus Christ express himself thus:

> "Who reads
> Incessantly, and to his reading brings not
> A spirit and judgment equal or superior,
> (And what he brings what needs he elsewhere seek?)
> Uncertain and unsettled still remains.—(*Book* iv.)

Add to these a sentence of Emerson's:* "The fact

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* Essay on History.

narrated must correspond to something in me to be credible or intelligible."

5. On the other hand, authorities innumerable have held the contrary or rhetorical opinion.

"What," asks John Stuart Mill,* "does anyone's personal knowledge of Things amount to, after subtracting all which he has acquired by means of the words of other people?"

Undoubtedly Mr. Mill believed that the perception of certain combinations of sounds or letters, and subsequent reflection thereon, constitute a real knowledge of something else that has never been perceived.

Dugald Stewart says:† "It is to the use of artificial signs that we are indebted for all our general conclusions; and without it, our knowledge would have been entirely limited to individuals. It is also to the use of artificial signs that we are indebted for all that part of our information which is not the immediate result of our own personal experience; and for that transmission of intellectual acquisitions from one race to another, which lays the foundation of the progressive improvement of the species." According to Dr. Brown,‡ "The noblest of all the benefits which language confers, is in that permanent transmission of thought which gives to each individual the powers

* Logic, vol. i, c. i.

† Outlines of Moral Philosophy, *Language.*

‡ Lectures, i., pp. 476-7.

and wisdom of his species; or rather,—for the united powers and wisdom of his species, as they exist in myriads at the same moment with himself, upon the globe, would be comparatively a trifling endowment—it gives him the rich inheritance of the accumulated acquisitions of all the multitudes, who, like himself, in every preceding age, have inquired, and meditated, and patiently discovered, or by the happy inspiration of genius have found truths which they scarcely sought, and penetrated, with the rapidity of a single glance, those depths of nature which the weak steps and dim torchlight of generations after generations had vainly laboured to explore. By that happy invention, which we owe indirectly to the ear, the boundaries of time seem to be at once removed. Nothing is past; for everything lives, as it were, before us. The thoughts of beings who had trod the most distant soil, in the most distant period, arise again in our mind, with the same warmth and freshness as when they first awoke to life in the bosom of their author."

II.

If the disputed point could be settled by a majority of quotations, the rhetorical side would probably have the best of it. But that mode of settling disputes,—philosophical disputes, at least,—has become all but

obsolete: the present canon of truth is Experience or Experiment, to which we now appeal.

1. Let the inquirer read or hear the description of any unknown place (say, Paris), and let him carefully note the mental image or thought of the place produced by the description. Then let him cross the Channel and compare the Paris created by words with the Paris created by observation, and he will find that the two are not only different, but have probably no visible resemblance. At least geographical knowledge cannot be created by Language.

2. There is a so-called science of Logic (which is a verbal study), and there is a science of the thinking processes (which is a study of our own mental operations). Whoever takes the trouble to acquire both sciences will find that they have nothing in common but their vocabulary: not even that of necessity.

3. If the rhetorical theory were true, it would be possible to learn a foreign language in our native country, by the sole study of grammar-books and lexicons. But such is not the case. For, let an Englishman learn a foreign language in that manner as long as he please and then go to the country in which the language is spoken, and he will find that the foreign words and the ideas associated in his mind never exactly coincide with the words and ideas associated in the foreign mind. English words are signs

of English things; foreign words are signs of foreign things; but nothing in England is altogether like anything abroad, therefore no English word can be synonymous with any foreign word.

For instance, *cake* is said to be *gâteau* in French, *galleta* in Spanish, *ciambella* in Italian; but the actual Italian thing called *ciambella* is not the same as the Spanish *galleta*, neither of these should be confounded with the French *gâteau*, and all three are different from the English *cake*. According to the dictionaries, *homme* means man, *bon* means good, *petit* means little, *pauvre* means poor, *mon* means my; but the phrase *mon pauvre petit bonhomme* does not mean "my poor little goodman," but something else. The other so-called synonyms are not more exact.

4. The laws of Music may be "taught" by words, but the ideas excited by such teaching are very different from those acquired by feeling out the chords upon an instrument (or otherwise hearing them) and observing the effect they have upon our own musical sense.

5. Every kind of Skill is knowledge, but no amount of learning will enable a man at once to make so much as a saleable tin pitcher, still less a watch, or a bridge, or a ship. Neither by scholarship alone can he ride a horse, or dance a quadrille, or steer a boat, or skate the figure "8" upon ice.

6. The knowledge of the Beautiful is not conveyable

by language. Only "he who has followed up the natural laws of aversion and desire, rendering them more and more authoritative by constant obedience, so as to derive pleasure always from that which God originally intended should give pleasure, and who derives the greatest possible sum of pleasure from any given object, is a man of taste."*

7. Certain so-called moral ideas may be received from books on ethics and from religious instruction and tradition; but these differ widely from the sense of duty acquired by one who has followed up the natural laws of Right and Wrong, "rendering them more and more authoritative by constant obedience," until the phenomena of conduct have shown their true resemblances. Such an one alone has any real knowledge of moral law.

Seeing, then, that Language cannot create any knowledge of Geography, of Logic, of Linguistic or Mechanical skill, of Music, of Æsthetics or of Ethics, is it credible that Language can create any of the remaining kinds of knowledge?

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* Ruskin, "Modern Painters."

BY DEDUCTION.

III.

Experience is the canon of Truth, but a course of experiments entered upon for the purpose of proving or disproving some preconceived doctrine, does not yield the best kind of evidence; because there is always a suspicion that the mind is not—as it ought to be—quite unbiassed in its observations, and indifferent to the result of them. But there is no room for any suspicion of prejudice, when the arguments employed are found as a by-product of theories that have been elaborated for another purpose.

The direct proof of the impotence of Language to create thought is abundantly confirmed by this kind of collateral testimony, of which two principal examples will be cited.

1. The rhetorical theory is contradicted by the ultimate propositions of Philology, which are:

(i.) That all words are metaphors, *i.e.*, references to certain things as symbols, substitutes or proxies of certain other things.

(ii.) That all words are primarily the signs of material things.

To these must be added three other propositions, of

which the first requires little demonstration, and the other two are self-evident.

(iii.) No two material things are identical.

(iv.) No material thing is identical with any immaterial thing.

(v.) Identical mental effects cannot be created by things that are not identical.

(i.) and (ii.) Professor Max Müller* says: "The fact that all words expressive of immaterial conceptions are derived by metaphor from words expressive of sensible ideas was for the first time clearly and definitely put forward by Locke, and is now fully confirmed by the researches of comparative philologists. All roots, *i.e.*, all the material elements of language, are expressive of sensuous impressions, and of sensuous impressions only; and as all words, even the most abstract and sublime, are derived from roots, comparative philology fully endorses the conclusions arrived at by Locke."

Professor Müller then quotes the following passage from Locke's chapter on *Language in General*.

"It may also lead us a little towards the original of all our notions and knowledge, if we remark how great a dependence our words have on common sensible ideas; and how those which are made use of to stand for actions and notions quite removed from sense, have their rise from thence, and from obvious sensible ideas

* "Lectures on the Science of Language," ii., p. 372.

are transferred to more abstruse significations, and made to stand for ideas that come not under the cognizance of our senses; *e.g.*, to imagine, apprehend, comprehend, adhere, conceive, instil, disgust, disturbance, tranquillity, &c., are all words taken from the operations of sensible things, and applied to certain modes of thinking. Spirit, in its primary signification, is breath; angel, a messenger; and I doubt not, but if we could trace them to their sources, we should find in all languages the names which stand for things that fall not under our senses, to have had their first rise from sensible ideas."

In brief: To speak is at bottom equivalent to placing the hand upon, or pointing the finger towards, certain *material* objects and operations. That is the sum total of Philology.

(iii.) *That no two material things are identical.* No man has ever seen two blades of grass that were exactly alike, nor two trees, nor two animals, nor two men. Neither is any fraction of the earth's surface exactly like any other fraction of it, nor any two seas, clouds, or stars. Things manufactured,—cast in the same mould, struck from the same die, or printed from the same type or plate,—are all dissimilar. The difference may be invisibly minute, but size and visibility count for nothing in exact thinking. Let the objects compared be two cubes of white marble of the same size and weight: if they differ by so much as the orientation of

their central molecule, they are not identities and true symbols of each other. And even could it be shown that both were alike to the last detail of their construction, there would still remain the difference in their attributes of circumstance, which is enough to vitiate the proposition that the one is identical with the other.

Operations are sufficiently differentiated by the difference in the things operating.

2. Now, all our knowledge is of two kinds: that which concerns material things, and that which concerns immaterial or mental things. And all words are (ii) primarily the signs of material things. Therefore in believing that, by means of Language, we can create the first kind of knowledge, we assume that a reference to certain *known* material things creates a knowledge of certain *unknown* material things: which is impossible, for (iii) no two material things are identical, and (v) identical mental effects cannot be created by things that are not identical.

And in believing that, by means of Language, we can create in the minds of other people a knowledge of our emotions, we assume that a reference to certain known *material* things creates a knowledge of certain unknown *mental* things: which is equally impossible, for (iv) no material thing is identical with any immaterial thing, and (v) identical mental effects cannot be created by things that are not identical.

Therefore no kind of knowledge can be created by Language: *Q.E.D.*

3. This argument may be thus condensed:

If it be conceived that things which are not identical cannot create identical thoughts; and if it be also conceived that a thing and its symbol are not identities; then it follows that a thing and its symbol do not create identical thoughts: which implies that when we take a symbol as equivalent to the fact it represents, we take a thing for what it is not—we are victims of a Fallacy.

IV.

The rhetorical theory of Language is inconsistent with the logical definition of Knowledge.

1. All mental operations are ultimately reducible to two kinds, which are technically called *Perception* and *Assimilation*. Both of these must co-operate to produce the unit of Knowledge, and perception always precedes assimilation.

(i.) When we look at an object and find it to be altogether *unlike* anything we have ever seen before, we are said not to "know" it: we cannot name it nor describe it—it is a mystery. Let us fix our attention to it as long as we may; let us analyze it to its ultimate particles: if the whole object and its parts

be totally unlike anything in our former experience, the object becomes only the more unaccountable and perplexing the longer we examine it.

This power of seeing things without "knowing" them is *Perception* or mere Experience. And what is here predicated of things that may be seen, is equally true of all other sensations and of all emotions.

(ii.) *Assimilation* has been thus described:

"Our only progress from the obscure to the plain, from the mysterious to the intelligible, is to find *resemblances* among facts, to make different phenomena, as it were, fraternize. We cannot pass out of the phenomena themselves. We can explain a motion by comparing it with some other motion, a pleasure by reference to some other pleasure. We do not change the groundwork of our conception of things, we merely assimilate, classify, generalize, concentrate, or reduce to unity, a variety of seemingly different things."*

"To know anything is to distinguish it as such or such—to class it as of this or that order. An object is said to be little known, when it is alien to objects of which we have had experience: and it is said to be well known, when there is great community of attributes between it and the objects of which we have had experience. Hence, by implication an object is com-

* Bain's "Induction," p. 116.

pletely known when the recognized unity is complete; and completely unknown when there is no recognized community at all. Manifestly, then, the smallest conceivable degree of knowledge implies at least two things, between which some community is recognized."*

Putting these definitions into a short working formula, we say that Knowledge is *Mere Experience* (Perception), together with the *Sense of Likeness* in experience (Assimilation). Or we may take the perception as understood, and simply say that "Knowledge is the sense of Resemblance."

2. Now, if it be possible, let the rhetorical definition of Language be true, and let also the logical definition of Knowledge be true. And let six men, each of them being master of one science not possessed by the others, be shut up together in a cell, or otherwise isolated so effectually that their perceptive faculty can be exercised only on words. Then if each of these men do in turn demonstrate the special knowledge of which he is possessed, and listen to the demonstrations of his companions, he will end by having five sciences more than at the beginning. In other words: the knowledge taken into that cell may, by mere force of talk, be increased by the sum of thirty sciences, because it is possible to create Knowledge by means of Language.

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* Herbert Spencer, "Psychology," p. 148.

But Knowledge is no other than the sense of likeness in our perceptions; and, by hypothesis, the men in question have perceived nothing but words during the time of their incarceration. The knowledge acquired in that period must therefore consist solely of the resemblances discovered in the words they have heard. And because assimilation cannot precede perception, that knowledge had no existence before the words were spoken within the cell; it cannot therefore be any of the sciences taken into the cell. Hence no diffusion of the original knowledge has taken place.

Nevertheless, it has been shown that each man has communicated one science and acquired five.

Therefore, if the rhetorical definition of Language be true, and if also the logical definition of Knowledge be true, it is possible to conceive a man so conditioned that he shall at the same time acquire five sciences and not acquire any, which is absurd. Wherefore the said definitions are inconsistent with each other: *Q.E.D.*

ESSENTIALS OF LOGIC.

V.

1. ATTRIBUTES.

From the Logical point of view, the Universe is nothing but an immense heap of attributes, such as roundness, straightness, angularity, hardness, softness, density, tenacity, heaviness, lightness, transparency, opacity, solidity, liquidity, lustre, dulness, smoothness, roughness, whiteness, blackness, redness, swiftness, slowness, newness, oldness, changeableness, stability, beauty, ugliness, symmetry, distortion, sweetness, sourness, sharpness, bluntness, and so forth; and what we call a *thing* or *phenomenon* is a group of attributes that stick together for a certain time. For example, an apple is a system made up of greenness, redness, roundness, acidity, sweetness, a certain degree of density and weight, and some other attributes. So long as these attributes hold together, we say that the apple exists; when they part company, the apple has ceased to exist.

There is nothing, then, but "attributes" and "systems" of attributes.

2. ESSENCE AND ACCIDENT.

Let us fix our attention upon the system called "This-tree," and write out a list of the attributes that compose it. The number of these is N together with *motion*, for the wind is blowing and the tree is swaying as we draw up the catalogue. In logical language the name "This-tree" *connotes* N + 1 attributes. To enumerate all these attributes is to *define* the name "This-tree."

But no sooner is our catalogue of attributes written out than the wind ceases to blow, and what we perceive is simply N, *i.e.*, a system of which motion forms no visible constituent.

We are now in a dilemma. According to our list This-tree has the attribute of motion: what we perceive has *not* the attribute of motion: therefore what we perceive is not This-tree. But to say that one tree has given place to another merely because the wind has ceased to blow upon it, is absurd: therefore what we perceive is still This-tree.

Evidently, then, the only legitimate connotation of "This-tree" is the system that is common to the two systems called *This-tree-in-motion* and *This-tree-at-rest*. We were mistaken in supposing motion to be

an *essential* attribute of This-tree; it was only an *accident* of it, and we accordingly strike it out of our list.

All thinking is made up of operations essentially similar to the above,—that is, a *perception* of systems, an *abstraction* of resemblance, and an *elimination* of difference.

DEFINITIONS.

1. "Names" are signs of systems.

2. To "define" a name is to enumerate the attributes of which it is the sign.

3. An "accidental" attribute is one whose absence does not affect the presence of the system.

> *Example.* To be saddled is an accidental attribute of a horse, for the horse is complete whether it be saddled or not.

4. An "essential" attribute is one whose absence involves the absence of the system.

> *Ex.* To be four-legged is an essential attribute of a horse, for any animal that has more or fewer than four legs cannot be a horse.

5. The "substance" of any system is the essential attributes that cannot, or need not, be distinguished.

6. We speak of "abstracting" essential from accidental attributes, and of "eliminating" accidental from essential attributes.

> *Ex.* To eliminate the accidental from the essential

attributes of a horse that happens to be saddled is (not to unsaddle it but) to conceive it to be unsaddled.

7. Every act of abstraction implies a comparison of two systems that are partly similar and partly different. This comparison is called "assimilation."

Ex. It is impossible to conceive a saddled horse unsaddled, unless we at the same time see, or have previously seen, a horse without a saddle.

8. "Knowledge" is the sensation that accompanies a complete set or cycle of mental operations.

9. "Science" is the knowledge that results from assimilating the essential attributes of systems.

10. "Common-sense" is knowledge that is partly based on accidental, and partly on essential, resemblance.

11. "Mythology" is knowledge that is wholly based on accidental resemblance.

Ex. The sense of the moon's resemblance to a shield, —for roundness is not an essential attribute of the moon nor of the shield.

12. "Explanation" is the announcement of knowledge.

NOTES.

A.

Unless speakers enumerate to each other the attributes connoted by their words, they may be speaking of entirely different things even when the subject of discourse is before their eyes; for one may have seen it only once and is thinking

of its accidental attributes, the other may have seen it many times and is thinking of its essential attributes. Hence the importance of defining words that are to be used in a strict sense.

B.

As a general rule, the essential are the least conspicuous attributes of a system, and therefore the most obvious resemblances are the least valuable.

C.

In interpreting Language we should make straight for the assimilation, and pay no regard to the syntax or "wording" of the proposition. All kinds of statements take the explanatory form, but the explanatory thought is different from all others.

D.

We can predicate to any extent about a thing without having the least knowledge of it. If the thing be complex, a statement of its essential attributes may occupy many years; a statement of its accidental attributes may occupy as many more; and a recapitulation of all that has ever been said about it may occupy a third period equal to the sum of the other two: but in all that there is no sense of the thing's resemblance to some other thing.

E.

As systems are of various degrees of permanency, abstraction is said to be of various degrees of *generality*. *High* and *low* in generality correspond to permanent and fugitive in system. The abstraction analyzed above is not the lowest, seeing that the separation of N + 1 (a 'Form') from its background or circumstances is essentially similar to the separation of N (an 'Individuality') from N + 1. What is called *Attention* or *Notice* is abstraction of Form. Form-systems are but one remove from utter incohesiveness: their abstraction is the lowest grade of knowledge and the first that becomes scientific (Geometry).

3. THE HIGHER ABSTRACTION.

(i) There is nothing in the nature of thinking that obliges us to confine elimination to difference of Form merely: we have the same right to ignore difference of Individuality. Individuality is nothing but position, and position not being an essential attribute of systems cannot be an essential difference between them.

Hence we may (if we can) assimilate Oak-in-the-garden to Oak-by-the-horse-pond, abstracting their sameness and overlooking their difference precisely as if they were two Forms of one tree. What we eliminate bears to what we retain the same relation as motion bore to This-tree.

We may go farther and assimilate This-elm to That-oak, abstracting and eliminating as before. Farther still, we may co-assimilate all the trees of our garden, abstract their sameness and give it a name; nay, we may assimilate all the plants of all the gardens of all the countries we have ever seen, and abstract their common quantity which might be termed the "abstract vegetable." This abstraction is the knowledge of all plants in precisely the same sense as the abstraction *This-tree* is the knowledge of the two subordinate abstractions *This-tree-at-rest* and *This-tree-in-motion.* As we fuse together a multitude of evanescent *Forms* to get at the rather general *Individual,* so do

we fuse together individuals to get at the still more permanent *Species*, so do we fuse together species to get at the very long-lived *Genus*. In the same manner, many genera make a *Class*, many classes make an *Order*, many orders make a *Kingdom*.

(ii) Animals are known in the same manner as plants. We begin by abstracting forms and individuals; we next get the common quantity of a variety or species; then of a genus, and so on until we reach the attributes common to all animals, which is the knowledge of all animals in the same sense as the abstract vegetable is the knowledge of all plants.

But there is a system of attributes common to the abstract plant and the abstract animal: there is an abstract organism, the knowledge of which is at once the knowledge of all plants and of all animals. Moreover, it is possible to reduce all inorganic systems to an abstract quantity which differs from the abstract organism in nothing but form and motion, which we eliminate as an accident. The abstraction now attained is the knowledge of the whole material universe in the same sense as the abstraction called "John-Jones" is the knowledge of the subordinate abstractions called "John-Jones-the-boy," "John-Jones-the-man," "John-Jones-the-batchelor," "John-Jones-the-husband," "John-Jones-the-poor," "John-Jones-the-rich," and all the other systems of which John-Jones is a constant element.

(iii) But the complete abstraction of Matter does not exhaust our attributes: we are capable—at least some of us are capable, of thinking about thinking. This brings into action a second and superior knowing-apparatus which, so to say, looks down upon the first —makes an object of it.

The process of knowing Mind is essentially similar to that of knowing Matter. We begin by assimilating and abstracting mental systems of the lowest generality, and continue to assimilate and abstract our way up the mental scale as we have already done up the material scale. If there be any considerable lacunas in our field of mental perception, we must of course fill them up by deliberate experiment.

But not only is the *process* of mental knowing essentially similar to that of material knowing—we eventually discover that Mind has a *substance* essentially similar to the substance of Matter; so that when at last we reach the highest mental abstraction we need not stop there, but may assimilate Mind to Matter, eliminate their difference (which, like the difference between the material organic and inorganic, is one of form and motion) and stand possessed of an abstraction that is the knowledge of the whole mental-material universe in the same sense as any inferior abstraction is the knowledge of the particular systems from which it is derived. That is the *ne plus ultra* of human knowledge; for, although there is reason to

believe that at least one other substance exists, we never perceive that substance as we do the other two, and we cannot therefore know it.

NOTES.

A.

As in passing from Form to Individuality we annihilate Geometry, so in passing from Individuality to Species we extinguish Arithmetic. Abstraction of Species involves abstraction of Individuals as this involves abstraction of Forms, but the *number* of lower systems that go to make one of the higher—so long as they make it—is of as little importance in the one case as in the other. If we have any capacity for the higher abstraction, we should by no means waste time in studying Forms and counting Individuals.

The method of Mathematics is excellent, because the triviality of its data has admitted of the method being soon carried to a high degree of perfection. All explanation will one day reach the exactness of mathematical demonstration, but in that day mathematical knowledge will be considered of slight importance.

B.

Unless our systems are truly perceived and well stripped to their essentials, it is all but impossible to find other systems essentially like them. In other words—exactness in the lower strata of knowledge is indispensable to success in the higher. That is the natural curb or regulator of abstraction.

For instance, the system A may be easily assimilated to other A-systems, B to other B-systems, C to other C-systems. But if we see A projected against B, which is projected against C; and if we abstract or cut out from our perceptive field the system compounded of A, B, and C in that conjunction, we may search the universe over and not find such another system. We

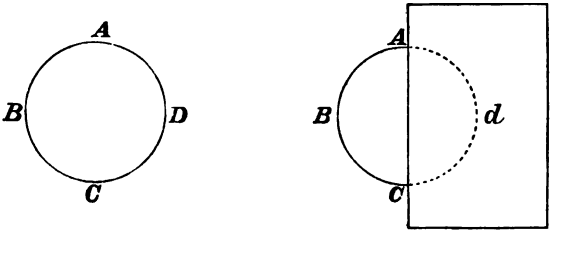
can, indeed, imagine such a system; we may be able to paint, draw or describe it, and if we take care to locate it far enough away in time or space its nonentity may be difficult to prove; but it would not be the less fictitious.

C.

Heterogeneous abstraction is not common with material observers, although they do distribute the stars into constellations; but under the names of Poetic Creation, Prophetic Vision, &c., it is not only common but the rule amongst mental observers. If mental and material knowledge had the same relative development, that kind of abstraction would not be tolerated; but there is such a dearth of mental knowledge that we welcome all expressions of it without pushing the assimilation too far.

4. SIMPLE CONCEPTION.

It often happens that one side of an assimilation is less complete than the other, in which case the absent or concealed attributes may be CONCEIVED.



Thus, if we enter a room on Monday and abstract the system ABCD (a picture or mirror) from its

circumstantial attributes, wall, panel, door, ceiling, furniture, &c., and again on Tuesday enter the same room and perceive only ABC, the part of our perceptive field formerly occupied by ADC being now occupied by a curtain; we shall nevertheless assimilate the Monday-percept ABCD to the Tuesday-percept ABC, and *conceive* that the remainder of the latter (A*d*C) exists entire beneath the curtain.

The part A*d*C is a "concept" (belief, conclusion, conviction, idea, theory, etc.). The sum of our concepts is commonly called our *Imagination.*

To "prove" or "demonstrate" the above concept is to show that in the interval between the first and second visit no one has entered the room and cut away part of the picture.

To "verify" the concept is to raise the curtain and perceive whether A*d*C be there or not.

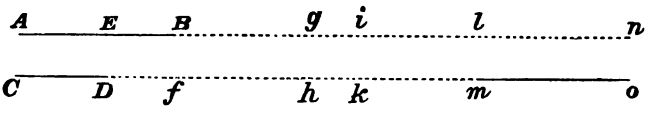
NOTE.

The true relation of the *perceived* to the *conceived* cannot be deduced from merely logical premisses: the equation will be found in a subsequent essay.

5. COMPOUND CONCEPTION.

Concepts may be assimilated to other concepts either completely or incompletely, and if incompletely

there results another concept one degree farther removed from the limit of perception.



Let the black lines represent the *perceived*, and the dotted lines the *conceived*, and let AB, CD be any two systems that have been wholly perceived. Then if the part AE be found to resemble the whole CD, the assimilator will conceive (believe, infer, or imagine) that associated with CD there is a system D*f* that bears to CD the relation borne by EB to AE.

D*f* is a simple concept; but it may have been already conceived, or may afterwards be conceived, that EB is associated with B*g*, in which case the assimilator will believe that D*f* is associated with *fh* equal to B*g*. And if there be any reason to conceive that B*g* is associated with *gi*, there is the same reason to conceive that *fh* is associated with *hk* equal to *gi*. In like manner, if *gi* is associated with *il*, *hk* is associated with *km* equal to *il*: and so on. The line C*m* may be driven out to the ends of creation, provided the conceiver's sense of Resemblance is sufficiently active.

A compound concept is proved when it is shown that all the assimilations leading up to it are scientific.

Thus, if it can be shown that A*g* is a permanent system of attributes, and that CD is essentially similar to AE, it follows that the whole C*h* is equal to the whole A*g*, and the part *fh* to the part B*g*. But if any of the premisses are doubtful, the conclusion is doubtful.

A compound concept may be verified if it be within the limits of perception. If *il* be equal to *km* and associated with *ln*, then *km* is associated with *mo* equal to *ln*; and *mo* may be realized by experiment. Thus, Le Verrier preconceived that a planet of a certain magnitude must exist in a certain quarter of the heavens, then turned his glass in that direction and perceived it.

NOTES.

A.

That is how the Imagination is built up. The line D*m* represents a chain of deductions or syllogisms, a process of reasoning or ratiocination, an association of ideas, a flight of fancy, a reverie, an ecstasy. Scientific concepts differ from others in nothing but their greater exactness or truth. A poet or rhetorician is content if his concepts are new and pleasing: a man of science breaks up all of his concepts that are not demonstrable or verifiable.

B.

Without conception the higher abstractions would be quite out of our reach. There are gaps between the varieties, species and genera that no amount of observation can fill up, because the intermediate systems no longer exist; and even of those that exist no man can perceive more than a fraction, let

him be ever so industrious. These being the actual conditions of knowledge, we must conceive the far by the near, the past and future by the present, the great by the small, the imperfect by the perfect, and so forth. As presented to us for knowing, the Universe is not unlike a piece of crabbed manuscript that is rendered more difficult to read by erasures, mispunctuation, and superfluous flourishes. Only by a patient study of the whole sheet and a free interpretation of obscure passages, can we hope to seize the one meaning that underlies all appearance.

6. COEXISTENCES.

Systems are extended in two planes, called SPACE and TIME, that stand at right angles to each other.

(i) Space-systems are also called "Coexistences," and may be subdivided into those whose attributes have always appeared together in a certain order ("Coherences"), and those whose attributes have not always appeared together in the same order ("Concomitances").

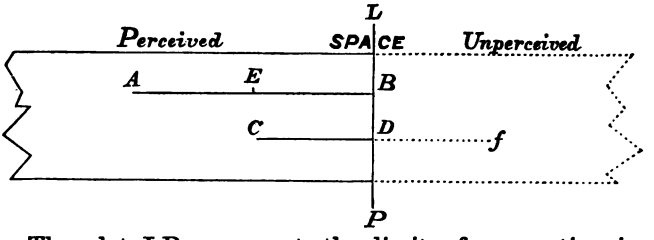
Exs. A rock is a *Coherence;* if a sea-gull alight upon the rock, the gull and the rock make a *Concomitance.*

(ii) Coexistence-assimilations may be "Complete" or "Incomplete."

(a.) A Complete Coexistence-assimilation is one of which the resembling attributes lie wholly within the limit of perception.

Ex. The square described on the hypothenuse of a right-angled triangle is equal to the squares described on the other two sides.

(b.) An Incomplete Coexistence-assimilation is one of which the resembling attributes do not lie wholly within the limit of perception.



Thus let LP represent the limit of perception in Space, and let AB, CD be any two systems that have been wholly perceived. Then if the part AE be found to resemble CD, the assimilator will conceive that beyond CD there is a system D*f* which bears to CD the relation borne by EB to AE.

Exs. A hot skin, quick pulse, intense thirst (AE) have invariably coexisted with Fever (EB); I again perceive a hot skin, quick pulse and intense thirst (CD = AE); therefore these also coexist with a Fever (D*f* = EB).

All men that I have ever seen to wear turbans (AE) were Turks (EB); this man wears a turban (CD = AE); therefore he is a Turk (D*f* = EB).

Great width of skull between the ears (AE) invariably coexists with a destructive temperament (EB); this person's skull is very wide between the ears (CD = AE); therefore he is of a destructive temperament (D*f* = EB).

All theories respecting the inaccessible parts of Space, such as the deep-sea bottoms, the centre of the earth, the off-side of the moon, the possible life of

other planets, and so forth, spring from Incomplete Coexistence-assimilations. It is impossible to conceive any invisible phenomenon that is quite unlike the visible.

7. SEQUENCES.

(i) Time-systems are also called "Sequences," and may be subdivided into those whose attributes have always succeeded each other in the same order ("Causations"), and those whose attributes have not always succeeded each other in the same order ("Alternations").

> *Exs.* A certain degree of molecular motion together with heat makes a *Causation;* light and darkness make an *Alternation.*

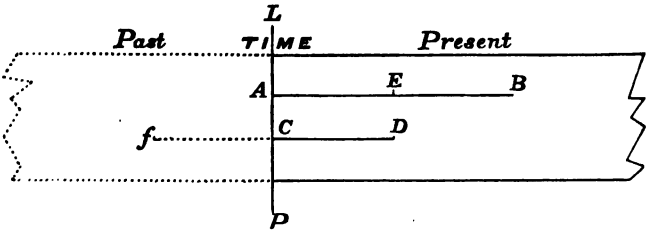
(ii) Sequence-assimilations may be "Complete" or "Incomplete."

(a.) A Complete Sequence-assimilation is one of which the resembling attributes lie wholly within the limit of perception.

> *Ex.* Fire, which consumes coal, will also consume wood, —*i.e.*, the sequence *coal . . . fire . . . combustion* resembles the sequence *wood . . . fire . . . combustion.*

(b.) Incomplete Sequence-assimilations are those of which the resembling attributes do not lie wholly within the limit of perception. They are of two kinds.

First. *Those that extend from the present to the* PAST.



Thus, let LP represent the limit of perception in Time, and let AB, CD be any two systems that have been wholly perceived, that is, any two sequences that terminate in the present time. Then if the part EB be found to resemble CD, the assimilator will conceive that CD has been preceded by *f*C, which bears to CD the relation that AE bears to EB.

Exs. "If at the present time we are able to produce flint tools (EB) precisely similar to the ancient scrapers (EB=CD) by the most simple means possible, and without the aid of any metallic appliances (AE), there is every probability that identically the same means (*f*C=AE) were employed of old."—*Evans.*

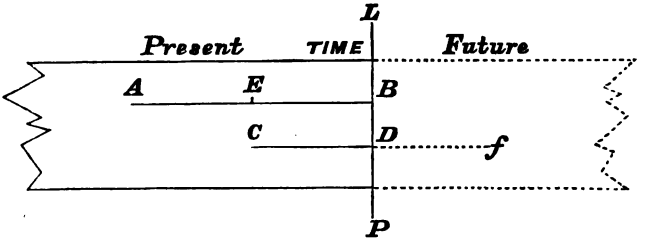
"Man (CD) is constructed on the same general type or model as other mammals (CD=EB); other mammals (EB) are descended from lower forms (AE); therefore man is descended from a lower form (*f*C=AE)."—*Darwin.*

At the present day the sea (AE) leaves ripple-marks on sandy beaches (EB); stones having similar marks (CD=EB) are found at a distance from the sea, but the marks upon them must have been caused by the sea (*f*C=AE) at some remote time.

The concepts of History, of Geology, of Palæontology, and all others that result from inquiring into the origin or causes of phenomena, are based on Past Incomplete

Sequence-assimilations. We can conceive no cause that is quite unlike those at present in operation.

Second. *Those that extend from the present to the* FUTURE.



Let LP again represent the limit of perception in Time, and let AB, CD be any two systems that have been wholly perceived, *i.e.*, any two sequences that begin in the present time. Then if the part AE be found to resemble CD, the assimilator will conceive that CD will be followed by D*f* which bears to CD the relation that EB bears to AE.

Exs. I sowed corn last spring (AE), and reaped a harvest in autumn (EB). If I sow corn this spring (CD=AE), I shall reap a harvest next autumn (D*f*=EB).

An incalculable number of men (AE) have died (EB); we are men (CD=AE); therefore we shall die (D*f*=EB).

Necessity (AE) is the mother of invention (EB); Dromo is necessitous (CD=AE); therefore he may become inventive (D*f*=EB).

By Future Incomplete Sequence-assimilations we foresee, expect, anticipate, hope, fear, &c. We are incapable of conceiving any future event that is quite unlike those at present taking place.

DEFINITIONS.

13. A "coexistence" is a system that is extended in Space.

Ex. A house.

14. A "sequence" is a system that is extended in Time.

Ex. In throwing a stone into a pool of water, the sequence is the chain of attributes that begins with the stone in the hand and ends with the disturbance of the water.

15. "Cause" and "effect" are antecedent and consequent (leader and follower) in the *essential* attributes of a sequence.

NOTES.

A.

From the preceding definition and examples of Conception, it will readily be inferred that each person's Imagination depends entirely upon the extent of his experience and power of assimilation. Our knowledge of the unperceivable bears a fixed ratio to our knowledge of the perceivable. What is unthinkable to one man may be commonplace to another.

B.

Abstraction tends to reduce all coexistences to points, and all sequences to lines. But the essential point of every coexistence is the cross-section of the essential line of a sequence. Hence, all coexistences ultimately resolve themselves into sequences.

C.

And all alternations at length break up into causations. The causation is the supreme, absolutely constant system. Y may be associated in Space with any or all of the other letters of the

alphabet, but in Time it is immutably chained to X before and to Z behind. Hence, the Universe is not, as it at first appears, a heap of attributes thrown together pell-mell and allowed to group themselves anyhow: it is rather a kind of tissue made up of long tough strips of attributes woven together in the most intricate and subtle manner. Space-phenomena are in reality the patterns that result from this curious kind of weaving; and if we unravel a certain number of Causations we cannot fail to notice that they all appear to converge at the antecedent end, as if they issued from the same point,—which they undoubtedly do.

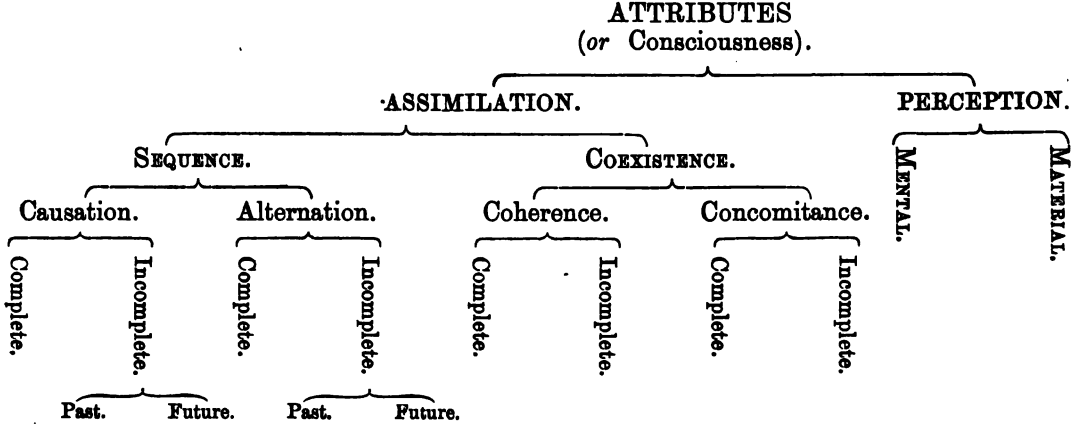
D.

One induction in particular enables us to sort our attributes *causally* with great rapidity: it is, that *all resembling systems have had a common cause which resembled its effects in that wherein these resemble each other.* Or thus: xy and xz have had a common cause x. Hence—

Because all animals resemble each other, they had a common origin that resembled the attributes common to all animals. And because all organisms resemble each other, they had a common origin that resembled the attributes common to all organisms. And because all material systems resemble each other, they had a common origin that resembled the attributes common to all Matter. And because Matter and Mind resemble each other, they had a common origin that resembled the attributes common to both. So that in seeking for the common attributes of systems (in abstracting, namely) we are in reality seeking for that which enables us to conceive their common origin; and on attaining the ultimate abstraction, we are in a position to conceive the first cause or causes of all things.

E.

The following scheme of the analysis may help to hold the parts asunder in the memory:—


ATTRIBUTES
(or Consciousness).
ASSIMILATION.
PERCEPTION.
SEQUENCE.
COEXISTENCE.
MENTAL.
MATERIAL.
Causation.
Alternation.
Coherence.
Concomitance.
Complete.
Incomplete.
Complete.
Incomplete.
Complete.
Incomplete.
Complete.
Incomplete.
Past.
Future.
Past.
Future.

ANTECEDENCE OF MIND.

VI.

Complete abstraction implies the resolution of Mind and Matter into a causation, whereof Mind is the antecedent and Matter the consequent. This conclusion may be thus demonstrated:

1. *Human mind is the cause of human expression.* In every human composite sequence (*i.e.*, a sequence whose attributes are partly mental and partly material) the mental attributes precede the material. Thus, knowledge precedes explanation, skill precedes work, design precedes execution, motive precedes action, and so forth. Moreover, the mental attributes are essential to the sequence. Where there is no knowledge, there is no explanation; where there is no skill, there is no work; where there is no design, there is no execution; where there is no motive, there is no action.

But, in a sequence, the essential attribute that leads

is (Def. 15) the cause of the other attributes. Therefore human mind is the cause of human expression.

2. *Human and not-human expressions are essentially similar.* The use of scientific words is to call attention to systems that are believed to resemble each other in all their essential attributes. Thus, the word *force* means primarily the strength of the human body (muscular energy), and the same word is scientifically used to connote attributes that are not human, such as gravitation, polarity, cohesion, &c. This extended use of the word *force* indicates the speaker's belief that between the human force and the not-human forces there exists the essential resemblance.

A similar belief is implied in the external imposition of the words *affinity, attraction, resistance, agent, factor, law, selection,* &c. These terms are primarily the signs of human attributes, and derive all their scientific value from the assumption that human affinity, human attraction, human resistance, human law, and so forth, are essentially similar to all other affinities, attractions, resistances, laws, &c., throughout the universe.

If these terms are misapplied, all the not-human explanations in which they appear are unscientific; and if so, there is then no such thing as scientific explanation of Matter—which is absurd. Therefore the human and the not-human are essentially similar.

3. But it has been shown that all human expression is the material effect of a mental cause. And now it appears that human expression is essentially similar to all other expression. Therefore all other expression is the material effect of a mental cause,—that is to say, every material effect has had a mental cause: *Q.E.D.*

NOTES.

A.

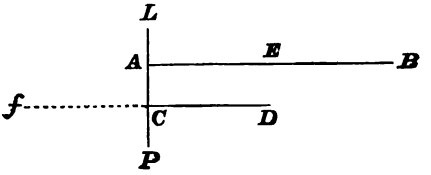
In the notation of common Logic, the above argument takes the form:

The human is essentially similar to the not-human.

Mind is an essential attribute of the human.

Therefore, Mind is an essential attribute of the not-human.

In the graphic notation of the preceding essay, the same argument is thus expressed:



Let AE represent human mind, EB human expression, and CD not-human expression. Then because CD is equal to EB which is preceded by AE, CD must be preceded by *f*C which is to CD as AE is to EB. For if *f*C does not exist equal to AE, then either AE is not an essential antecedent of EB, or EB is not essentially similar to CD,—conclusions that are equally incredible. Therefore *f*C must exist equal to AE.

That *f*C is not perceived does not invalidate the conclusion, for whether *f*C existed or not it would be equally unperceived.

B.

Of course it is not necessary to conceive that stones and plants and beetles have human souls, any more than they have human bodies. It is enough to conceive that Mind is coextensive with Matter, and, like Matter, may occur in systems of all degrees of complexity or perfection of organization.

C.

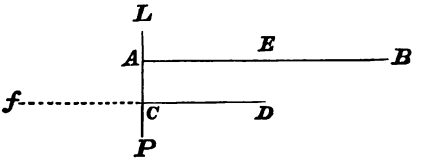
But if Mind is the cause of Matter, something else must have been the cause of Mind, and must itself have been caused by a fourth substance, which is the effect of a fifth, and so backwards to an indefinite distance. That which is immediately anterior to Mind must be conceived in order to explain certain mental phenomena: the rest cannot be perceived and need not be conceived, for a reason that will appear in the sequel.

INTERPRETATION.

VII.

We are now in a condition to analyse the process of "Interpretation," by which is meant the conception of the mental cause of any material phenomenon.

Every interpretation involves three assimilations.



First. Let AE be a mental cause in the human system *Dromo,* and let EB be its material effect (a gesture, sound, or action). Then if AE and EB occur often enough in Dromo's system, Dromo will resolve the whole AB into a causation, and will conceive that AE is invariably followed by EB and that EB is invariably preceded by AE, until he have reason to conceive the contrary. That is a *Complete Assimilation of Causation.*

Second. Let Dromo often enough perceive another man *Pompey,* and Dromo will assimilate himself to

Pompey, that is, see the likeness between himself and Pompey; and Dromo will conceive that this likeness extends to all the unperceived attributes of each, until he have reason to conceive the contrary. That is an *Incomplete Assimilation of Coherence.*

Third. Let Dromo now perceive on Pompey's body an expression CD that to Dromo appears essentially similar to Dromo's own expression EB, and Dromo will conceive that CD has been preceded by a mental phenomenon fC essentially similar to AE—until he have reason to conceive the contrary. That is an *Incomplete Assimilation of Causation.*

Dromo has now 'interpreted' Pompey's expression CD. The whole process takes place every time we "comprehend" the meaning of a word or the motive of an action.

NOTES.

A.

If any one of the assimilations be unscientific, the conclusion is unscientific. That is: if AE, EB be not a causation but an alternation; or if Dromo be not essentially similar to Pompey; or if EB be not essentially similar to CD: then fC is not essentially similar to AE,—that is, Dromo is mistaken in believing that Pompey thinks AE.

B.

The meaning of a proposition is the motive that prompted it, not the assimilation it carries on the face of it. Thus, if Dromo have said that A is equal to B, the interpretation of this is the conception of Dromo's motive in making such a statement.

Whether, in effect, A is equal to B, or not, is another question altogether—one that can be answered only by appealing directly to A and B.

C.

There is little danger of our being misled by the Fallacy of Language, if we always bear in mind that the only thoughts we ever *perceive* are our own individual thoughts: never under any circumstances do we perceive the thoughts of other people, any more than we perceive the thoughts of birds, fishes, trees, or crystals. If perception were essential to certainty, we had no certainty that anyone thought besides our personal self. Interpretation, at best, is nothing but a well-grounded theory or hypothesis that certain expressions of others have been preceded by thoughts equal to those that in our own persons have been associated with similar expressions. To speak of "borrowing ideas," "conveying sentiments," "communicating knowledge," and so forth, is mere Common-sense. We can no more give another "a bit of our mind" than we can give him a bit of our body.

D.

The conviction we feel that many of our interpretations are true, is an argument for the causality of expression. For, if there were not an immutable relation between Mind and Matter; if it were possible to express otherwise than we thought; if our words and actions were not as mechanically joined to our thoughts as the ring of a bell to the pull of the rope,—no interpretation had ever been possible, and the certainty of its truth had never existed in our minds. We should as soon have thought of predicting the political events of next century from the sun-spots of to-day, as hazarded a theory respecting the thoughts of our neighbours.

E.

If Dromo and Pompey be born at the same time, be endowed with equal mental and bodily organisms, and occupy the same

circumstances; then for each thought that appears in the mind of Dromo a thought equal to it in every respect will at the same instant appear in the mind of Pompey, and the expressions of both will be similar and simultaneous. Their expressions will also be mutually intelligible without any agreement on their part: they will be in possession of a perfect "language" although their minds may be less developed than that of a dog or spider.

But let Dromo swerve from the circumstances common to him and Pompey, and receive a thought x whose expression is y. Then it is quite impossible that Pompey should conceive x from the perception of y, even though his soul were equal to Plato's or Shakspere's.

These are the extreme cases in Interpretation. They throw into relief the main fact of it, namely, that our own personal experience is what furnishes the major premiss of all our interpretations.*

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* Compare with the following—

It is only my own mind that I know directly; of the minds of others my knowledge is indirect, circuitous and haphazard. Self we know by the introspective consciousness; our fellows are known by objective signs—by gesture, conduct, and communicated information. . . . . We must each use our single and solitary mind as a key to the whole human race; and not to it only, but to all superhuman and all infrahuman minds. . . . We are forced to act upon the assumption that, on a given occasion when another personality behaves outwardly in all respects as we should behave, such person feels inwardly as we feel.—Bain, *The Emotions and the Will*, pp. 25-26.

Words do not appeal directly to the Intuitions of other minds, but must be comprehended by translation through their Ideational consciousness; signifying to each one the ideas he is prepared by his previous habits of thought to attach to them. —Carpenter, *Mental Physiology*, ch. vi.

In dealing with other beings and interpreting their actions, we must represent their thoughts and feelings in terms of our own. The difficulty is that in so representing them we can never be more than partially right and are frequently very wrong. The conception which any one frames of another's mind is inevitably more or less after the pattern of his own mind—is automorphic; and in proportion as the mind of which he has to frame a conception differs from his own, his automorphic interpretation is likely to be wide of the truth.—Herbert Spencer, *The Study of Sociology*, p. 114.

This incapacity of speech to reveal all that the mind contains meets us at every point. The soul of each man is a mystery which no other man can fathom: the most perfect system of signs, the most richly developed language, leads only to a partial comprehension, a mutual intelligence whose degree of completeness depends upon the nature of the subject treated, and the acquaintance of the hearer with the mental and moral character of the speaker.—Whitney, *Language and the Study of Language*, p. 111.

MATERIALISM.

If asked to deduce from the physical interaction of the brain molecules the least of the phenomena of sensation or thought, we must acknowledge our helplessness.—Tyndall, *The Nineteenth Century*, Nov. 1878.

I, individually, am no materialist, but, on the contrary, believe materialism to involve grave philosophical error. This union of materialistic terminology with the repudiation of materialistic philosophy I share with some of the most thoughtful men with whom I am acquainted.—Huxley, *The Physical Basis of Life.*

VIII.

By combining conclusions that are found in the last two arguments, we evolve a new conclusion of some importance,—which is, that Man can have no perfect knowledge of anything but Man.

1. *The perfect knowledge of any human expression is the interpretation of it,—i.e.,* the conception of its mental cause.

Thus, if we receive a letter (which is a human

expression) we do not regard it as a merely material phenomenon,—we do not weigh, measure, and chemically analyse it, nor compute the amount of cerebral, neural, muscular, and mechanical energy that has been expended in producing and delivering it—considering all that to be a perfect knowledge of the letter. On the contrary, we pay very little attention to its material attributes and antecedents—no more than is necessary to enable us to conceive the thought that occupied the sender's mind at the moment of writing. This concept is the perfect knowledge of the letter: a concept that excluded this, although it included all the other essential antecedents of the letter, would be no perfect knowledge of it. And so with all other human expressions.

2. It has been shown (VI) that human and not-human expressions are equally caused by Mind. And the perfect knowledge of any human expression is the interpretation of it. Therefore the perfect knowledge of any not-human expression is the interpretation of it, that is, the conception of its mental cause.

3. But it follows from the analysis of Interpretation given in the last section, that a man can interpret no material effect whose mental cause is essentially different from his own thoughts. And without Interpretation there is no perfect knowledge. Therefore, no man can perfectly know any material effect whose

mental cause is essentially different from his own thoughts, that is, Man can have no perfect knowledge of anything but Man: *Q.E.D.*

NOTES.

A.

Hence the impossibility of deducing the Universe from purely material inductions. Apart from Mind the phenomena of Matter are essentially similar to a letter written in an unknown language: we may resolve it to its ultimate atoms, and yet have no perfect knowledge of it. However incredible this conclusion may appear, the only alternative conclusion (namely, that the not-human is essentially different from the human and may be perfectly known without any reference to its mental cause) is a thousandfold less credible.

B.

The error of the materialist does not consist in his assimilating the Human to the Not-human. That assimilation is quite inevitable, and there would be no desire to evade it if men were freed from the thraldom of words. The materialist errs in that he does not admit all the concepts that necessarily follow from his own assimilation. He is not self-consistent; for, whilst in theory he proclaims the essential similarity of the human and the not-human, he in practice acknowledges one standard of science for the human (namely, *Interpretation*), and an essentially different standard for the not-human (namely, *Material Analysis*).

One of these must be given up: if Man, Brute, Plant, and Crystal are only different combinations of the same elements, we must know them all in the same way. That is: we must in future know men as we now know crystals (which would be madness), or we must in future know crystals as we now know

men (which is impossible). Either we must cease to interpret, or else we must acknowledge that nothing is knowable that cannot be interpreted. If material analysis is Nonsense when applied to human expression, it can be nothing else when applied to any other expression.

It is a matter of indifference (logical indifference) which criterion of science we acknowledge, so long as we hold to it consistently; but we cannot retain both without cancelling the original assimilation.

C.

Although it is impossible to conceive the mental causes of not-human individualities, it is still possible to formulate a sufficient theory of the Universe; just as the impossibility of interpreting all the expressions of men, does not prevent our conceiving the unity of mankind. The not-human Mind may be cleared at one conceptive flight: we can perfectly know Matter in general, although we cannot perfectly know more than the human fraction of it in particular.

D.

The extreme materialist who regards material science as the only or final wisdom, and the literary pedant who regards the knowledge of books as equivalent to the knowledge that produced the books—are accidental varieties of the same essential type. The latter takes the perception of human expression for the conception of human mind, the former takes the perception of not-human expression for the perception of not-human mind. Pedantry is Materialism, and Materialism is Pedantry. The Fallacy of Language is a piece of the great Fallacy of Matter.

SYMBOLISM.

IX.

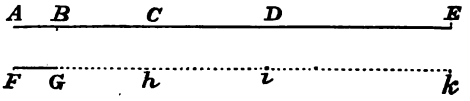
1. THESIS.

Material science is not the final wisdom, but it is absolutely necessary for two purposes, which are—the perfection of our material civilization and *the expression of our mental knowledge.* This latter proposition requires some demonstration, the other is self-evident.

2. SYMBOLS.

All rational human expressions are reducible to two great classes,—those that operate on Matter, and those that operate on Mind. The first may be called ARTIFICE, and includes Agriculture, Architecture, Navigation, Commerce, the Military Art, &c.; the second may be called SYMBOLISM, and includes Names, Signals, Maps, Ceremonies, and so forth.

Symbolism is a certain application of the law of Conception (see V., 4. 5). According to this law, if we



abstract any system AE made up of the attributes (or sub-systems) AB, BC, CD, DE, and afterwards perceive an attribute FG sufficiently like AB, we shall conceive that FG is associated with G*h*, *hi*, *ik*, having the same resemblance to BC, CD, DE, as FG has to AB. Whence it is evident that if Dromo and Pompey have made the same abstraction, and it afterwards appear desirable to Dromo to make Pompey *conceive* that abstraction, Dromo may accomplish his purpose by making Pompey *perceive* any part of the abstraction.

All symbols are of that essential pattern, but they have the following differences, which merit separate notice.

SYMBOLS.

Explanatory.		Conventional.	
Direct.	Indirect.	Direct.	Indirect.

Each species may be subdivided into two varieties, according as the Fact is material or mental, and doubtless the analysis might be carried to a still greater degree of minuteness, if that were necessary.

DEFINITIONS.

16. A "Symbol" (FG) is anything offered for perception, not for its own sake, but for the sake of suggesting some other thing.

17. The thing meant to be suggested by a symbol is called the "Fact" (BE).

18. The perpetuation of symbols after they have ceased to be effective is "Superstition."

N.B.—Symbols are always *material*, but Facts may be mental or material.

NOTES.

A.

In *Sartor Resartus* Carlyle has a chapter on Symbols, which contains the following:—

"By Symbols is man guided and commanded, made happy, made wretched. . . . . Have I not myself known five hundred living soldiers sabred into crows'-meat for a piece of glazed cotton, which they called their Flag; which, had you sold it at any market-cross, would not have brought above three groschen? Did not the whole Hungarian nation rise, like some tumultuous moon-stirred Atlantic, when Kaiser Joseph pocketed their Iron Crown; an implement, as was sagaciously observed, in size and commercial value little differing from a horse-shoe? It is in and through *Symbols* that man, consciously or unconsciously, lives, works, and has his being: those ages, moreover, are accounted the noblest which can the best recognise symbolic worth, and prize it the highest."—*Book* III., c. 3.

In his Essay *The Poet*, Emerson remarks:

"The schools of poets and philosophers are not more intoxicated with their symbols than the populace with theirs. In our

political parties, compute the power of badges and emblems. See the great ball which they roll from Baltimore to Bunker Hill! In the political processions, Lowell goes in a loom, and Lynn in a shoe, and Salem in a ship. Witness the cider-barrel, the log-cabin, the hickory-stick, the palmetto, and all the cognizances of party. See the power of national emblems. Some stars, lilies, leopards, a crescent, a lion, an eagle, or other figure, which came into credit God knows how, on an old rag of bunting, blowing in the wind, on a fort, at the ends of the earth, shall make the blood tingle under the rudest or the most conventional exterior. The people fancy they hate poetry, and they are all poets and mystics!"

B.

The great potency of Symbols results from the causal or dynamic relation of Mind to Matter Every material motion must be preceded by a mental motion, mind being to matter as steam is to an engine. Hence, if the initial difficulty of establishing the symbol be once overcome, it is as much easier to govern men by acting on their minds symbolically instead of on their bodies mechanically, as it is to control a steam-engine at the throttle-valve instead of at the circumference of the fly-wheel.

3. EXPLANATORY SYMBOLS.

An "explanatory" symbol resembles its Fact, as the words *whizz, crack, bang, frizzle, cuckoo.*

(a.) A "direct" explanatory symbol *immediately* suggests its Fact.

EXAMPLES.

(*In which the Fact is material.*)

A picture.—A map.—A model.—Onomatopoetic or de-

scriptive words. — Mimicry. — Pantomime. — Descriptive Music.

(*In which the Fact is mental.*)

Metaphysical and logical diagrams (Aristotle's Square, Porphyry's Ladder, etc.)—Idols.—Allegorical painting and Sculpture (of apotheoses, judgments, visions, Paradise, Hades, the Devil, the Graces, the Deadly Sins, and so forth).— The resemblance of the Jewish temple to the human system is too obvious to have been accidental.— "Chalk, charcoal and clay, have ever been esteemed the emblems of freedom, fervency and zeal, because nothing is more free for the use of man than chalk, which seldom touches but leaves its trace behind; nothing more fervent than charcoal, for when well lighted no metal is able to resist its force; nothing is more zealous than clay, our mother earth, who will open her arms to receive us when forsaken by all our friends."—(Oliver's *Cyclopedia of Freemasonry*—CHALK.)

(b.) An "indirect" explanatory symbol does not immediately suggest its Fact.

The indirect explanatory is necessary when the symbol cannot be produced, and must itself be symbolized. The last member of such a combination may be called the *effective*, the other or others the *instrumental*. Spoken or written symbols being the most portable, are usually the instruments by which we call attention to remote or stationary symbols. Anything that has a name (that is, which can itself be symbolized by words) may thus be made a symbol of something else.

Examples.

(*In which the Fact is material.*)

"The planets move in orbits." That is: the line described by a planet in space is *like a track* made by a wheel. The *track* is the effective member, but a track not being a portable symbol, must itself be symbolized by words or otherwise.

"Particles of matter move amongst one another like gnats in a swarm."

"Conduction of heat is the spreading of molecular motion like agitation in a crowd."

"Life is like the commander of an army."

"A nation is like an organism."

"Red waves of light are to blue as billows are to ripples."

"Thy neck is like the tower of David."

"He has a fist like a sledge-hammer."

"He *flew* to her rescue."

(*In which the Fact is mental.*)

"I will speak daggers to her." That is: my words will wound her soul as the thrust of a dagger would wound her body.

"The path of the just is like a shining light."

"Flattery is like the picture of a suit of armour—it yields delight but renders no service."

"Modesty is to merit as the shadow is to a figure in a picture—it throws it into relief."

"Vain and frivolous persons, like empty vessels, are easily laid hold of and borne along by the ears."

"The kingdom of heaven is like unto treasure hid in a field."

"Pleasures are like poppies."—"Buoyancy of spirits."

This kind of Symbol includes fables, allegories and parables, such as Bunyan's *Pilgrim's Progress*, Milton's *Paradise Lost*, Spenser's *Fairy Queen*, Dante's *Divina Commedia*, the Legend of the *Grail*, and a host of others.

NOTES.

A.

The possibility of explanatory symbolism of *mental* Facts results from the relation of resemblance between Mind and Matter (*see* V, 3, iii). This relation is by no means obvious, for a reason that will be given hereafter. In a popular work on Logic it is written: "A pleasure, a thought, a desire, have nothing in common with extended things"—a statement that every trope, parable and metaphor in the language disproves. Are not poppies like pleasures? Is not mercy like the gentle rain from heaven? Is not wisdom like light? Is not the mind like a sheet of paper? Is not the profligate soul like a perforated cask? Is not the Christian life like a race, a battle, a journey? Is not the king's wrath like the roaring of a lion?

B.

The essential resemblance of Mind and Matter has more than once been plainly enough expressed. For instance—

"The Lord, void of envy, appeareth through the whole world. Thou mayest see the Intelligence, and take it in thy hands, and contemplate the Image of God. . . . . Holy art thou of whom all Nature is the Image."—Hermes, *Pymander*. [For *Lord*, *Intelligence*, *God*, read 'Mind;' for *Nature* read 'Matter.']

"The Principles which have understood the Intelligible works of the Father

He has clothed in sensible works and bodies,

Being the intermediate links standing to communicate between the Father and Matter,

Rendering apparent the images of unapparent natures,

And inscribing the unapparent in the apparent frame of the world. . . . . .

For the paternal Intellect, which understands Intelligibles, and adorns things ineffable, has sowed symbols through the world."—Zoroaster (in Cory's *Ancient Fragments.*)

"In our doctrine of Representations and Correspondences, we shall treat of both these symbolical and typical resemblances, and of the astonishing things which occur, I will not say, in the living body only, but throughout nature, and which correspond so entirely to supreme and spiritual things, that one would swear that the physical world was purely symbolical of the spiritual world; insomuch, that if we choose to express any natural truth in physical and definite vocal terms, and to convert these terms only into the corresponding and spiritual terms, we shall by this means elicit a spiritual truth, or theological dogma, in place of the physical truth or precept, although no mortal would have predicted that anything of the kind could possibly arise by bare literal transposition; inasmuch as the one precept, considered separately from the other, appears to have absolutely no relation to it. I intend hereafter to communicate a number of examples of such correspondences, together with a vocabulary containing the terms of spiritual things, as well as of the physical things for which they are to be substituted."—Swedenborg, *Animal Kingdom.*

"Poet and Prophet differ greatly in our loose modern notions of them. In some old languages, again, the titles are synonymous; *Vates* means both Prophet and Poet: and indeed at all times, Prophet and Poet, well understood, have much kindred of meaning. Fundamentally indeed they are still the same; in this most important respect especially, That they have penetrated both of them into the sacred mystery of the Universe; what Goethe calls 'the open secret.' "Which is the great secret?" asks one.—"The *open* secret,"—open to all, seen

by almost none! That divine mystery, which lies everywhere in all Beings, 'the Divine Idea of the World, that which lies at the bottom of Appearance,' as Fichte styles it; of which all Appearance, from the starry sky to the grass of the field, but especially the Appearance of Man and his work, is but the *vesture*, the embodiment that renders it visible. This divine mystery *is* in all times and in all places; veritably is. In most times and places it is greatly overlooked; and the Universe, definable always in one or the other dialect, as the realised Thought of God, is considered a trivial, inert, commonplace matter,—as if, says the Satirist, it were a dead thing, which some upholsterer had put together!"—Carlyle, *On Heroes.*

"Parts of Speech are metaphors, because the whole of nature is a metaphor of the human mind. The laws of moral nature answer to those of matter as face to face in a glass. 'The visible world and the relations of its parts, is the dial-plate of the invisible.' The axioms of physics translate the laws of ethics."—Emerson, *Language.*

The same writer, commenting on the above passage from Swedenborg, observes:—

"The fact thus explicitly stated, is implied in all poetry, in allegory, in fable, in the use of emblems, and in the structure of language. Plato knew of it, as is evident from his twice bisected line, in the sixth book of the Republic. Lord Bacon had found that truth and nature differed only as seal and print; and he instanced some physical propositions, with their translation into a moral or political sense. Behmen, and all mystics, imply this law in their dark riddle-writing. The poets, in as far as they are poets, use it; but it is known to them only as the magnet was known for ages, as a toy. Swedenborg first put the fact into a detached and scientific statement, because it was habitually present to him, and never not seen. It was involved, as we explained already, in the doctrine of identity and iteration, because the mental series exactly tallies with the material series. It required an insight that could rank things in order and series; or, rather, it

required such rightness of position, that the poles of the eye should coincide with the axis of the world. The earth had fed its mankind through five or six millenniums, and they had sciences, religions, philosophies; and yet had failed to see the correspondence of meaning between every part and every other part. And, down to this hour, literature has no book in which the symbolism of things is scientifically opened. One would say, that, as soon as men had the first hint that every sensible object—animal, rock, river, air—nay, space and time, subsists not for itself, nor finally to a material end, but as a picture-language to tell another story of beings and duties, other science would be put by, and a science of such grand presage would absorb all faculties."—*Representative Men.*

4. CONVENTIONAL SYMBOLS.

A "conventional" symbol does not resemble its Fact, as the words *love, faith, knowledge, memory, upon, was, three.*

The law of Conception is common to all our abstractions, let them be ever so heterogeneous. Thus, if we abstract a system composed of a sight-attribute and a taste-attribute (as the compound of whiteness and sweetness called *sugar*), we shall *conceive* the whiteness when we *perceive* only the sweetness, and we shall *conceive* the sweetness when we *perceive* only the whiteness.

And so with all other combinations of attributes. If the system be *Taste + Touch,* the perception of the taste alone will suggest the touch, and the perception

of the touch alone will suggest the taste. If the combination be *Touch* + *Sound* + *Smell*, the touch will suggest the sound and smell, the sound will suggest the touch and smell, the smell will suggest the touch and sound. If the abstraction consist of *Sight* + *Taste* + *Touch* + *Smell* + *Sound*, the perception of any one of these will cause the conception of all the rest, and a material attribute will suggest a mental attribute, a mental will suggest a material attribute.

Hence, if the Fact to be symbolized be unique and inimitable, or if there be any other reason why it cannot be furnished with an explanatory symbol, all that is necessary is to co-abstract (associate) it with any phenomenon that can be easily produced or referred to, and this phenomenon will then be a 'conventional' symbol of the Fact.

Heterogeneous systems that form a natural concomitance, are pretty sure to be co-abstracted without any conscious effort, and can therefore be used as symbols of each other without expressed convention.

(a.) A "direct" conventional symbol immediately suggests its Fact.

EXAMPLES.

(*In which the Fact is material.*)

A postage-stamp.—Naval, military, and railway signals.—The ringing of bells.—The alphabet.—Beacons, cairns,

and monuments.—Undescriptive words.—Proper names—(the act of christening is a formal co-abstraction of Fact and Symbol).

(*In which the Fact is mental.*)

Salutations (hand-shaking, hat-lifting, bowing, &c.).—Ceremonial oaths.—Insignia of authority (crown, sceptre, fasces, mace, bâton).—Insignia of rank (armorial bearings, decorations, trophies, wreaths).—Religious ceremonies (sacraments, processions, vestments, feasts, fasts, pilgrimages, holydays). It is probable, however, that some religious ceremonies are meant to be explanatory.

(b.) An "indirect" conventional symbol does not immediately suggest its Fact.

Here, as in the indirect explanatory, the instrumental member of the symbol is generally language.

EXAMPLES.

(*In which the Fact is material.*)

"He lodges at the *Full Moon*." The name "Full Moon" is a conventional sign of the house that is meant to be suggested.

"OH_2" (the chemical symbol of water).

"Homer in russia costs one guinea."

"Whitechapel streamed westward at an early hour."

"St. Stephen's heard the rumour."

"Will you hand me that mackintosh?"

"A dozen of Bordeaux."

(*In which the Fact is mental.*)

"*Argent* a man's heart *gules* on a chief *azure* three stars of the first."

"She gave her hand, but not her heart."

"Yea, mine own familiar friend in whom I trusted, which did eat of my bread, hath lifted up his heel against me."

The natural concomitance of mental and material percepts, enables poets and others to suggest the former by a mere catalogue of the latter. It is a manner of evading the trouble of mental analysis whilst retaining an appearance of mental knowledge. Thus, in the opening stanzas of Gray's *Elegy* a kind of tranquil, half-melancholy emotion is superinduced, by a list of material phenomena whose only relation to the emotion is one of accidental coexistence.

The curfew tolls the knell of parting day,
The lowing herd winds slowly o'er the lea,
The ploughman homeward plods his weary way,
And leaves the world to darkness and to me.

Now fades the glimmering landscape on the sight,
And all the air a solemn stillness holds,
Save where the beetle wheels his droning flight,
And drowsy tinklings lull the distant folds,

Save that from yonder ivy-mantled tower
The moping owl does to the moon complain
Of such as, wandering near her secret bower,
Molest her ancient solitary reign.

The *Horrible* is suggested by allusions to darkness,

murder, instruments of torture, reptiles, &c., as in the witch-scenes of *Faust*, *Macbeth*, and *Tam o'Shanter*.

What is called the *Sublime* is associated with vast but harmless phenomena of Matter, such as mountains and great chasms, thunder and lightning, the roar of falling water, the blast of trumpets, the starry sky, and so forth. The effect is heightened by metre, capital letters, points of exclamation, and other symbols of astonishment.

NOTES.

A.

The advantages of Symbolism are purchased by a certain amount of disobedience to the rule of Logic (V, 3, Note B) which requires that our abstractions should be as homogeneous as possible, our assimilations as true as possible. The whole of Conventional Symbolism is a gross violation of this rule, and the bulk of Explanatory Symbolism is very imperfect when judged by the standard of pure abstraction. Symbolism is an affair of social convenience that was not taken into consideration when the ingredients of things were dealt out. In order, therefore, that our Symbolism should cost us as little as possible,—for every violation of the logical rule tends to blunt our sense of Resemblance, to retard our progress in knowledge,—we should (other things being equal) choose Explanatory rather than Conventional symbols, and of the Explanatory we should choose those symbols that have the greatest resemblance to the Facts. The *perfect* symbol is another individual of the same species as the Fact, but perfect symbolism is not often possible.

B.

Bad symbolism is specially dangerous for those that will not, or that can not, perceive the Facts; for their conception of the Facts depends altogether upon the resemblance of Fact and Symbol. A man, for instance, whose only conception of the solar system has been derived from an orrery, will assuredly believe that the planets are joined to the sun by metal rods and driven by clock-work. So gross a blunder is not likely to be committed with respect to material Facts, these being comparatively easy to perceive and symbolize; but blunders of the same magnitude are not uncommon with respect to mental Facts, which are difficult to perceive and still more difficult to symbolize. Some beliefs concerning the Immaterial, held most obstinately by mankind, have no better foundation than the wheels and joints of a parable—something that was essential to the symbol, but not represented in the Fact.

C.

There are always two parties to the establishment of a symbol,—namely, the artist or inventor of it, and the person that is made to perceive it. And the symbol must be taken from the universe common to both. Therefore the badness of a symbol is not always chargeable to the artist, for if he *must* produce an immediate effect on persons that are greatly his inferiors, he has no alternative but to degrade his symbolism to the level of their capacity—he must sacrifice truth to effect. We do not speak to children as we speak to grown-up persons.

5. CONCLUSION.

Now, our mental knowledge cannot be expressed except by material symbols. And Explanatory are better than Conventional symbols. Therefore it is

better to speak of mental Facts in terms of similar material phenomena, than in terms of phenomena that have been accidentally or conventionally associated with the mental Facts. Moreover, of the material phenomena that may serve as symbols of mental Facts, some resemble these Facts more than do others, and it is better to use the more rather than the less resembling symbols. But,—and this is the supreme mystery, the sublimest nicety of symbolic philosophy, — the material phenomena that bear the greatest resemblance to all the mental Facts perceivable by living men, are the *highest generalizations of Physics, Chemistry and Biology*; not individual objects such as roses, lilies, willows, oaks, the balm of Gilead or the odours of Arabia, light, darkness, dawn, twilight, the wind, the sea, gardens, pits, fires, birds, serpents, rocks, trees, houses, personal adventures, and the other objects that constitute the usual equipment of the professional symbolist. Matter is, indeed, the complete, continuous, all-revealing Symbol of Mind; but it is Matter *as it appears to the trained material scientist*, not as it appears to the untrained poet, prophet, or transcendentalist. Therefore, in order properly to express mental knowledge, it is necessary to know Matter personally and scientifically: *Q.E.D.*

A THEORY OF THE UNIVERSE.

It is by no means necessary that hypotheses should be true, nor even seem to be true; it is enough if they reconcile calculation with observation.—*Copernicus.*

In the whole world is a Triad, over which a Monad rules.—*Zoroaster.*

The whole Universe is substantial.—*Hermes.*

For the invisible things of him from the creation of the world are clearly seen, being understood by the things that are made. —*St. Paul.*

X.

I.—POSTULATES.

The attributes common to every part of the Universe are Substance, Motion, and Order. This abstraction enables us to construct a theory that covers all phenomena without exception.

1. There is one Substance which appears in at least three great varieties. The uppermost variety (the crust, so to say, or bark of the Universe) is what we call MATTER; the next may be called MIND; and

the third may be called SPIRIT. These are packed within each other like air within water, and ether within air. Spirit may contain a fourth substance, the fourth a fifth, the fifth a sixth, and so inwards; but that concept is not required for explanatory purposes.

Let us say, then, that there is a *Principle of* SUBSTANCE.

2. There is likewise a *Principle of* MOTION; for no substance, or any part of a substance, ever appears in a state of absolute rest.

3. Finally, there is a *Principle of* ORDER, whose function is to unite the Same and separate the Different.

NOTES.

A.

If any of these so-called ultimate attributes had the least resemblance to either of the others, it would be possible to abstract their common quantity and conceive something antecedent to both. But all three are absolutely different: that is the reason they are here called 'Principles' (Beginnings or First Causes).

B.

The reduction of Matter alone to its ultimate essence, is no uncommon achievement. Haeckel* finds that the fundamental properties of every natural body are matter, form, and force. Professor Huxley† undertakes to demonstrate that a three-fold unity,—namely a unity of power or faculty, a unity of

* "History of Creation," v. i., p. 328.

† *On the Physical Basis of Life* (in 'Lay Sermons, Addresses and Reviews.')

form, and a unity of substantial composition,—pervades the whole living world: which is but one step from the summit of material abstraction—a step that Mr. Huxley appears to be equally able and willing to take.

II.—APPLICATION.

Let it be conceived that the First Principle has called into existence an unlimited quantity of the primitive substance, that the Second Principle has put every atom of it in motion, and that the Third Principle awaits our signal to initiate the Phenomenal.

1. The signal being given, the similar particles *m* and *n* move towards each other and combine their substances and motions to form the system O. Let us call that CREATION.

> In Matter, Creation appears as Gravitation, Crystallization, Chemical Affinity, Attractions of Magnetism, Electricity, Coherence, Cohesion, &c. It also includes the construction of organic systems by the union of similar inorganic substances, and accounts for the phenomena of Healing, Repair, Hunger, Lust, Covetousness, and Conquest.
>
> In Mind, Creation appears as Abstraction, Curiosity, Benevolence, Friendship, and Love.

2. The particle *m* afterwards finds a particle *p* more like itself than *n*, and, leaving the society of *n*, *m* joins with *p* to constitute a new system Q. O no longer exists. That is DESTRUCTION.

> Material Destruction includes Dissolution, Decay, Disease, Dissipation, Death.

Mental Destruction includes Degradation, Despair, Disillusion, Disappointment, Forgetfulness.

3. The exclusion of n from the new system Q, may be called the law of EXCOMMUNICATION.

Thus: the elements combine only in certain proportions; organic creation is accompanied by exhalation, exudation, evacuation; assimilation is accompanied by elimination of accidents; the State confines or destroys criminals; the Church excommunicates heretics; Society *cuts* and *snubs*; the human individual that values his stability has to practice temperance and reserve. Neither in the natural nor in the artificial is there any instance of pure, impromptu Creation.

4. That the gain of p is exactly equivalent to the loss of n, is known as the CORRELATION or PERSISTENCE OF ENERGY.

5. That there must be a continuous line of systems from the Principles to any given system, is the law of CAUSATION. To conceive the essential antecedents of a system is to know the 'causes' of it. The Principles are the converging or vanishing point of all the lines of Causation.

6. It follows from paragraph 2, that the more homogeneous a system is, the longer it survives; for its component parts have less temptation to unite with other systems.

This deduction is verified by the experience of statesmen, chemists, naturalists, machinists, &c. And the *Good*

of each system being its stability, that is best which lasts longest.

7. The tendency of Order to produce systems of greater and greater stability, is the law of DEVELOPMENT (Growth, Evolution, Improvement, Progress, Civilization).

It is by Development that the relatively stable solar system has succeeded the relatively unstable cosmic vapour; that the man has succeeded the brute; that the wise man has already to some extent, and will eventually altogether, succeed the foolish one; that peace will succeed war; that everywhere civilization will replace barbarism, and love will replace hatred.

8. When a particle of a system becomes itself a centre of Creation, it separates from the parent system and thenceforth pursues an independent existence.

That is PROCREATION; which includes Generation by fission, germination, incubation and birth; Colonization; the division of Languages into Dialects, of Religions into Sects, &c.

9. The principle of Order being as potent within as without, the parts of great systems have a tendency to group themselves into small systems, the parts of these into smaller systems, and so downwards to a point.

Hence the differentiation of organs and faculties; the division of labour; the formation of castes, cliques, guilds, societies and institutions; the division of an army into cavalry and infantry, regiments and companies; the divi-

sion of a book into chapters, paragraphs and sentences. Each system contains smaller systems to invisibility, and is contained by greater systems to invisibility. The Universe is nested like a set of pie-dishes or the slides of a closed telescope; which accounts for the possibility of conceiving the whole of it from very partial observation.

10. That no change can take place in the substance, motion or order of any system, unless a corresponding change have previously taken place in the Principles—is called INERTIA.

Material Inertia is Newton's First Law of Motion,—"Every body perseveres in its state of rest or of uniform rectilineal motion, unless compelled to change that state by impressed forces."

Mental Inertia explains the phenomena of Memory (every thought remains unchanged until it be modified by other thoughts); of Induction (we believe that what has been will be, until we have reason to believe the contrary); of Deduction (which is a kind of Induction, both being species of Assimilation); of Heredity and Custom (which are effects of specific or generic memory); of Obstinacy, Bigotry, Scepticism (the inertia of Mind at rest); of Credulity (the inertia of Mind in motion); &c.

The Perceived is to the Conceived as Actual is to Potential Energy.

NOTE.

It follows from the law of Development that the men of this century are, on the whole, wiser than the men of any preceding century. But Development is slow, wisdom is not cumulative, the historical period is comparatively short, and men's powers and circumstances vary greatly. Hence it is quite conceivable

that at any time within the last five or ten thousand years, men may have existed that reached, and even overshot, the limits of average modern abstraction. And, in effect, when we break into the upper regions of Thought, and then compare our abstractions with the records of ancient knowledge, we find this to be the case. What is commonly called "Revelation" is nothing but the results of ancient generalization. The symbols of the few first became the "gods" of the many; afterwards the gods of the many were found to be convenient symbols for the few. The above theory,—uninterpreted or misinterpreted, —is common to all the principal creeds of the world. So is the next.

THE HUMAN SYSTEM.

The soul is not a compensation, but a life. The mind is a finer body, and resumes its functions of feeding, digesting, absorbing, excluding, and generating, in a new and ethereal element. Here, in the brain, is all the process of alimentation repeated, in the acquiring, comparing, digesting and assimilating of experience.—*Emerson.*

The mind of every one is his internal man, which is actually a man, and dwells within the external man, that makes its body; therefore, in the rejection of the body by death, it is in a complete human form.—*Swedenborg.*

Grant me to become beautiful in the inner man.—*The Prayer of Socrates.*

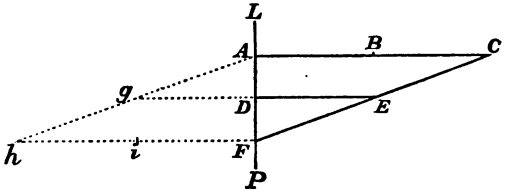
Though our outward man perish, yet the inward man is renewed day by day.—*St. Paul.*

XI.

I. Man is built of the same substances, and on the same general design, as the whole of which he is a part. A well-developed specimen consists of a *body* of Matter, containing a *soul* of Mind, within which is a *spirit* of Spirit. When the first is an adult, the

second should be an embryo, and the third should be a germ.

Of this theory the essential skeleton may be thus delineated.



Let AB represent our bodily substance, BC the sense of material creation, DE our material knowledge, EC the dynamic relation of Mind to Matter (VI), and EF the static relation of Mind to something else (X, II, 10). All these are *perceived* phenomena. But it is also perceivable that DE (our material knowledge or mental consciousness) is equal to BC (our sense of material creation); therefore DE is associated with *g*D (a mental organism) equal to AB (our body). And because EF is equal to CE, there exists a third conscious substance *h*F (Spirit) that is to the whole *g*E as *g*E is to AC. In other terms—our whole Consciousness divides into three essentially similar portions, of which one is the sense of material creation; therefore the other two are the senses of two other creations. All the alternative conclusions involve absurdities.

(a.) It will be noticed that Spirit is wholly concep-

tual; for the sense *of* any substance is the sense *in* the next higher substance undergoing creation, and as Spirit is the highest organized substance in our system, Mind must be the highest substance perceivable by us. In order to perceive Spirit it would be necessary to have another organism that should dominate Spirit as Spirit dominates Mind, or as Mind dominates Matter. But we have no such fourth organism: not all have even the third.

(b.) The concept A*h*F is by no means a "stretch of the Imagination;" for of the whole A*h*FC we perceive one half, which is as good a proportion of fact to theory as we had any right to expect, especially as the theory itself requires that at our present stage of development we should perceive exactly so much and no more. A*h*F has a broader perceptive basis than nine-tenths of the concepts to which we trust implicitly every day of our lives. For all practical purposes it is an absolute certainty.

II. The following are the principal similarities that support it.

1. As Taste is to Digestion, so is material Perception to Assimilation.

In other words: Perception is the sensation that accompanies the contact of the Soul with its circumstances, as Taste is the sensation that accompanies the contact of the Body with its circumstances. And Assimilation is the sensa-

tion that accompanies the absorption into the Soul of mental substance, as Digestion is the sensation that accompanies the absorption into the Body of material substance.

2. As Taste does not imply Digestion, so Perception does not imply Assimilation.

That is: the perception of many individual facts in which we perceive no resemblance, does not of itself constitute knowledge, any more than the tasting of a variety of foods constitutes alimentation.

3. As that which is wholly unlike a body is not digestible by that body, so that which appears unique to a mind is not knowable by that mind.

4. Appetite is to the Body as Curiosity is to the Soul.

5. As, from the food received into the stomach we extract that which is similar to the Body and reject the different; so, from the perceptions of the Soul we abstract the similar (or essential) and eliminate the different (or accidental).

That single equation explains the whole subject-matter of Logic (*see* V, 2).

6. As the development of the body consists in often enough repeating the above (5) unit of alimentation upon a sufficient variety of food; so the development of the soul consists in often enough repeating the

corresponding unit of mentation over a sufficiently wide area of experience.

Hence, as far as the stability of the *Soul* is concerned, the whole duty of man is to acquire *material* knowledge.

7. As excellency of bodily creation consists in drawing the greatest amount of nourishment from the least quantity of food; so excellency of mental creation consists in drawing the best inductions from the least experience.

8. As it is injurious to eat what we cannot digest, so it is injurious to perceive what we cannot understand.

9. As the body cannot feed on past, absent and future food; so the soul cannot know past, absent and future events.

10. As we cannot feed by deputy, so we cannot know by deputy; but—

11. As he that has fed may indicate how food is to be obtained, so he that knows may indicate how knowledge is to be acquired.

Hence the value of Language (and other kinds of Symbolism) as a guide-post to Knowledge, and the folly of taking the index for the thing indicated.

12. As different foods become similar bodies, so different experiences yield similar characters.

13. As similar foods become different bodies, so similar experiences yield different characters.

14. The Soul, like the Body, is happy or miserable according to its state of health.

Mental pleasure is called Cheerfulness, Gaiety, Animation, Enthusiasm. Mental pain is Ennui, Low-spirits, Melancholy, Ill-temper, Spleen, Sulkiness. The mentally weak are said to be Stupid, Imbecile, Obtuse, Slow, Prosaic, Timid, Cowardly. The mentally strong are Bold, Smart, Clever, Talented, Learned, Sagacious, Acute, Shrewd, Enterprising. The souls of Columbus and Napoleon were of extraordinary power. The former had some spirituality to boot; the other had not—he was only two-thirds of a great man.

15. As the individual body belongs to a great material system, so the individual soul belongs to a great mental system.

The external relationships of Souls yield what are called the *Moral* or *Social* sentiments.

It follows from the principle of Order that all perfectly homogeneous societies are perfectly moral. There is no social wrong but misplacement. A man never appears a criminal to his equals; but he is a criminal to his inferiors as to his superiors, if the difference between them exceed a certain limit. Jesus appeared guilty to the people of Jerusalem, Socrates appeared guilty to the Athenians: it is all a question of Sameness and Difference. The criminals of one generation are not unfrequently the heroes and martyrs of the next.

Therefore the whole moral law, the law of social stability, may be comprehended in one commandment,—"Classify yourselves rightly." For if we associate with those that

resemble ourselves, we shall love them; if we love them, we shall take a pleasure in helping them; and mutual love and helpfulness include all morality. A tribe of savages that love each other are more moral (polite or loyal) than a society of Christians that are so ill-assorted as to hate each other—for there is hatred even in Christendom! National laws are at best only rude attempts to enforce behaviour that the law of Kindness (that is, the natural impulse of those that are of a common *kind* or *kindred*) would effect spontaneously.

16. As the Soul is to the Body, so is the Spirit to the Soul.

Spiritual creation is what the Buddhists call *Nirvâna, The Great Awakening, Absorption into the Deity*, &c.; it is what Jesus Christ called *Regeneration, Eternal Life*, and *Entrance into the Kingdom of Heaven;* it is what mystics and transcendentalists call their *Illumination*. Its beginning is sudden and startling; in the space of a few hours one may receive an increase of consciousness as great as the difference between the lowest barbarism and the highest material culture. To give the just equivalent: it is a consciousness as far above the opening intelligence of a child as that is above the first sensations of material creation.

17. As material knowledge is the growth of the Soul, so mental knowledge is the growth of the Spirit.

Hence, as far as the stability of the *Spirit* is concerned, the duty of man is to observe and compare his *mental* operations; but in order that there should be anything to observe, he must already have thought on a rather large scale. That is to say, a healthy soul is as necessary to a holy spirit as a sound body to a healthy soul.

18. As a body in which mental creation has not yet begun can have no knowledge of Matter; so a soul in which spiritual creation has not yet begun can have no knowledge of Mind.

That accounts for the failure of Metaphysics. "It is because the majority of thinking men have been convinced that inquiries conducted on the Metaphysical Method are but as dreams, that they have everywhere in Europe fallen into discredit. Once the pride and glory of the greatest intellects, and still forming an important element of liberal culture, the present decadence of Metaphysics is attested no less by the complaints of its few followers than by the thronging ranks of its opponents. Few now believe in its large promises; still fewer devote to it that passionate patience which is devoted by thousands to Science. Every day the conviction gains strength, that Metaphysics is condemned, by the very nature of its Method, to wander for ever in one tortuous labyrinth, within whose circumscribed and winding spaces weary seekers are continually finding themselves in the trodden tracks of predecessors who could find no exit."*

Quite so. The metaphysician describes the mental sensations without conceiving the substantial operations that underlie them, and his philosophy is worth as much and no more than a physiology of unsubstantial bodily sensations —if there is such a thing.

19. As no material knowledge can be acquired except by personal perception and assimilation, so no mental knowledge can be otherwise acquired.

20. The spiritual appetite has been styled "Hun-

* Lewes, HISTORY OF PHILOSOPHY, *Prolegomena.*

gering and thirsting after righteousness," "Seeking the face of the Lord," "Intimations of Immortality," "Ideal aspirations," and other names.

21. The Spirit, like the Soul, is a cause of happiness or misery according to its state of health.

The sensations of spiritual ease and disease correspond more or less to what are called the *Religious Sentiments.*

The religious terminology of Christendom is chiefly Biblical. It was invented by people who were undoubtedly spiritual, but who nevertheless knew as little about their spirits as a child knows about its soul, and less about Matter (from which their symbols had to be taken) than an average schoolboy of the present day. They were not artists; they seized the first figure that presented itself, content if they expressed their meaning no matter how vaguely. Hence, although their symbols are good enough to be easily interpreted by one who already knows the Facts, they are also bad enough to make it very desirable to substitute better.

For instance, when a person feels spiritually well, he is said to be "in a state of grace," to be "under the influence of the Holy Ghost," to have "the love of God shed abroad in his heart," &c., &c. All actions that betoken a spiritual constitution below the average robustness are called "sinful" or "the works of the Devil." Concepts that if realized would cause spiritual disorder are called "temptations of Satan." Satan himself is a personification (that is, a man set up as a symbol) of Destruction, especially spiritual Destruction. That all spirits (like all souls and bodies) are weak before they are strong, supports the deplorable doctrine of "Original Sin." Spiritual suffering is called the "scourge," the "wrath" or the "chastening" of "God," "the voice of God in the heart," "remorse" or

"hell." Spiritual convalescence is "reconciliation with Christ," the "forgiveness of God," "Conversion,"—and so forth.

All the other Christian terms that have any material meaning at all (if we except the word *holiness* and a few others) are equally tropical, and should be replaced by the names of those material phenomena that exactly correspond to the perceived spiritual effects. Such a change of Symbolism would greatly add to the dignity and importance of the Facts. It would also in the minds of the ignorant substitute a comparatively true for an egregiously false conception of our supermaterial system, and consequently a better for a worse mode of treating it. If men knew that the Soul is another sort of Body, and the Spirit another sort of Soul, they would rely more upon the higher diet and exercise, and less upon litanies and incantations for their "peace of mind."

NOTES.

A.

Consciousness is only another name for the Universe. If there were no Conciousness there would be nothing. To say that the Universe is an effect of three Principles or Factors, that its structural unit is a system composed of three attributes, that our Consciousness is a multiple of three percepts—are identical statements. "I" could not be conscious, that is, have the I-consciousness, before "I" was created; but the parts of which "I" is composed had their respective universes before they met to constitute "I:" doubtless they have them yet, and will retain them when they are no longer "I."

Each system has its own Universe. Two men, for instance, look at the same tree and agree that there is only one tree; but there are in reality two trees, one in the conciousness of each man. And if there were three men there would be three trees, if there were four men there would be four trees, and so on. But if a man and a snail met before the same tree, it is highly

probable that only one tree is, so to speak, *universed:* it is unlikely that the snail can abstract the system *tree*, or even perceive it.

Between the extreme in which two equal men universe two equal trees, and the extreme in which a man and a snail can universe only one tree between them, we can suppose an infinite number of cases wherein (the man being constant and the other system variable) that which is universed is one tree and an infinite number of other things. What a man calls a tree in his own universe, he would not call a tree if he could for a moment perceive it with the consciousness of a sheep. Nay, the same object appears very different to a wise man and an ignorant one, and to the same man at different points of his development and in different states of his system. As Boethius says: "Everything is known by virtue of powers residing in the person comprehending it;" and the person comprehends it more or less,—that is, it appears to him one thing or another thing,—according as his powers are strong or feeble.

For, as Bishop Berkeley pointed out, all that we call *external* is in reality *internal*—a state of ourselves. Our consciousness begins with our creation, increases with our development, decreases with our reversion, disappears with our destruction. It is like an elastic balloon that can be blown out to any size, if the creative breath within us be only strong enough. Hence the dependence of knowledge on personal integrity—on soundness of body, soul, and spirit. It is impossible that a bad man should be wise.

The words of Hermes are true—"All appearance is Creation." Dromo recognizes Pompey in the street: that means that Dromo has received an increase in mental substance; or, rather, *because* Dromo has received an increase in mental substance he recognizes Pompey. The sensation *recognition of Pompey* is nothing but the signal of a change in Dromo's own system. We are not dreaming, as Shakspere thought,—we are *feeding*.

B.

The phraseology of these essays would be simplified by the following slight changes:

for Taste	*substitute*	Sensation;
„ Digestion	„	Absorption;
„ Material Perception	„	Perception;
„ Material Assimilation	„	Assimilation;
„ Mental Perception	„	Sentiment;
„ Mental Assimilation	„	Intuition.

Then the interrelations of the corresponding phenomena may be thus indicated:

SUBSTANCE.	CONSCIOUSNESS.	
	CONTACT.	CREATION.
MATTER - - -	Sensation.	Absorption.
MIND - - - -	Perception.	Assimilation.
SPIRIT - - - -	Sentiment.	Intuition.

The Contact and Creation of one Substance explain the Contact and Creation of any other Substance. The essential attributes of Sensation are represented in Perception and Sentiment, the essential attributes of Absorption are represented in Assimilation and Intuition. The accidental or specific difference is substantial merely.

C.

The assimilation of the Soul to the Body explains our Immaterial Phenomena as Newton's theory explains the stellar

motions, as Franklin's explains the phenomena of lightning, as Darwin's explains the sameness and difference of animals. It points to a familiar fact that bears to the Soul precisely the same relation as the fall of a stone bears to the deflection of a planet, as the electric spark bears to a flash of lightning, as the variations of dogs and pigeons bear to the difference of species. It enables us to conceive the Soul from the perception of the Body, as we conceive a strange city from a plan of it, as we conceive the earth from a school globe, as we conceive the solar system from diagrams and orreries. It explains what Metaphysics only describes. It renders the use of tropes and parables as unnecessary in mental explanation as they have for some time been in material explanation: the Body being a complete image of the Soul, all other imagery is superfluous and misleading. Lastly, it reconciles the inductions of material science to the fundamental spiritual doctrines, viz., that the universe proceeds from a Trinity of causes and that the Soul will survive the Body if properly developed in the present life, this development being no other than the acquirement of Wisdom and the practice of Virtue. The light thus thrown upon things in general, and the human system in particular, amply compensates for the loss to our Scholarship (which is neither Wisdom nor Virtue) that results from exposing the FALLACY OF LANGUAGE.

THE END.